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THE WALTER E. FERNALD PLAN FOR THE EXAMINATION OF RETARDED SCHOOL CHILDREN*

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INTRODUCTION

THE action of the New England Health Institute in including a Mental Hygiene Section in its program for the year occasioned no little comment among psychiatrists in this section of the country. It is good to see that mental disease and mental defect are being recognized as public health problems. These disorders have too long been classified among the "hush-hush" diseases, and it augurs well for the future of the public health that they are now taking their place in the public eye. We note also that three of the four papers comprising the Mental Hygiene Section of the program discuss mental problems of childhood. It is encouraging to see that psychiatry has not lagged behind general medicine in recognizing the fact that the child is the most fruitful source of information as to the pathological changes observed in the man.

HISTORICAL SKETCH

The subject which I am about to present to you today is in the nature of a biographical sketch. It presents a story of the crowning accomplishment of a man's life. Although this is written nearly seven years after the death of the late Dr. Walter E. Fernald, it tells of the great work which has gone on after him, a work which is a more fitting monument to his memory than any material edifice could possibly be. The high position which Massachusetts now occupies in the care of the mentally deficient is due largely to the pioneer work of Dr. Fernald. His untiring energy and discerning foresight have not only placed the work on a high plane in New England but have benefited hundreds of thousands of retarded and backward children throughout the world.

Over thirty years ago Dr. Fernald realized that there was an urgent need for greater public recognition of the problem of mental deficiency. In addition, he realized the urgent necessity for early diagnosis and treatment of the various problems of mental retardation. Hundreds of children were being committed to his school at the age of 18 or 20 years, cases on whom the diagnosis had been postponed until the individual was an adult. The medical profession itself was not entirely free from blame. There were innumerable instances of physicians who told parents that the children would probably outgrow the early symptoms of mental deficiency. Thus, the problem was one of educating the medical profession as well as the general public. Dr. Fernald undertook the arduous task of appealing directly to the public and to the medical profession. Through writings and numerous talks over a period of years he finally succeeded in placing mental deficiency before the public mind in its proper position as a major social problem.

In order that this school at Waverley might assist in the matter of early recognition of mental deficiency, Dr. Fernald created his well-known out-patient department to examine, diagnose and render advice in cases referred to him from the community. By this time, however, public interest had so increased that he was unable to meet all demands for this service, and it became evident that some other means must be devised to meet the problem. In addition, it was difficult for parents or other interested individuals who resided at a distance to bring their children to Dr. Fernald's school at Waverley for the needed examination. While this out-patient clinic served the Boston area to advantage, many cases residing in other parts of the State remained desperately in need of advice.

The public schools likewise had large numbers of retarded children. No means of transportation was available by which these children might be brought to Dr. Fernald's out-patient clinic for diagnosis. Educators soon began to feel the need for psychiatric aid in diagnosing and caring for these individuals. Regular classes were being markedly interfered with and the progress of entire grades held back by the presence of a few backward children. Some progressive schools had met the problem by creating special classes, but the crying need was for a method of *determining the exact mental status of these retarded children before their placement in a special class.* The great mass of public schools were still unwilling to make the move,

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then considered radical, of setting aside special teachers and classrooms for the care of their retarded children.

Dr. Fernald saw that mental deficiency was so widespread, and affected such a comparatively large portion of our population, that institutional care could never be the practical or even the desired way of settling the problem. He realized the urgent need for early recognition and adequate care for *all* mental defectives or, in fact, for all children with any degree of retardation whether or not mentally defective.

Over twenty years ago he said that the care of the great majority of mentally deficient children must be an educational problem and should be taken care of in the proper manner within the various public school systems. The public schools, however, lacked a means of diagnosing the actual degree of existing mental defect. The result was that only extreme cases were being cared for in the scattered special classes. This was not because of any unwillingness to meet the problem, but because a satisfactory method of diagnosis and necessary funds for the establishment of special classes were not available.

To assist in the matter of diagnosis of mental deficiency, Dr. Fernald then conceived the thought of projecting his out-patient examinations into the public school system. He devised a plan whereby the personnel of his out-patient clinic would become a traveling unit and visit each public school in turn to conduct a comprehensive examination of all retarded children in those schools.

In the fall of 1914 Miss Edith M. Dixon (the present Director of Child Study of the Worcester public schools) went to Dr. Fernald at Waverley and asked him if some method could be devised whereby the Worcester schools might know a little more about their backward pupils. This request, coming as it did at a most propitious moment, was answered by the creation of the first traveling psychiatric school clinic. Dr. Anna Wallace was placed in charge of their clinic, and the first public school children were examined at Worcester on December 15, 1914. In 1915 Dr. Edith E. Woodill assumed charge of the work of this group, and later Dr. E. S. B. Woodward became school clinic physician.

During the first year a total of 126 children were examined. The work progressed slowly, and other towns took advantage of this service. In 1917 the late Dr. George L. Wallace created the second traveling school clinic to operate from the Wrentham State School, this clinic being under the charge of Dr. Mildred A. Libby. Later this work was taken over by Dr. Alice M. Patterson.

The two clinics had the difficult task of pioneering in a new and untried field. It must be remembered that psychiatry at that time had not had the benefit of the intensive work carried out over the past fifteen years in the field of mental hygiene. Then, the mental defective was considered a menace to the community, and a rather general public misconception of the whole subject had been built up. This had meant the denial of public sympathy to a group very much in need of it. The clinics had to overcome the ingrained prejudices which had been built up by many years of misunderstanding.

Requests for the service of the two clinics soon increased beyond their capacities, and it became evident to Dr. Fernald that if all retarded children were to have the benefit of an early psychiatric diagnosis it was necessary to make still further arrangements. It was also becoming necessary to make provision for the retarded children once the diagnosis had been made and advice rendered. The situation was as follows: Many school superintendents, aware of the need for special provision for backward or mentally defective children, felt that the special class was the answer, at least for certain types of these children. However, when they attempted to establish such classes, they encountered opposition from school boards or from other guardians of the municipal purse-strings. This opposition did not arise from any unwillingness on the part of educators to care for the retarded children, but mainly from the feeling on the part of town officials that education was including too many new, untried and expensive items in the school curriculum. The special class meant another room, a new teacher, and certain equipment for hand work which was unnecessary in the regular grades.

The task now was to devise some means of actually providing for these special classes. Dr. Fernald worked in conjunction with the Department of Mental Diseases and the Department of Education in outlining a method whereby this might be accomplished. The result of their work is shown in a law enacted by the General Court of 1919 to legalize the operation of the clinics throughout the public school system and to require the establishment of special classes. This law was later amended by the Legislature of 1922, and is as follows:

"Chapter 71, Section 46, General Laws, as amended by statutes, 1922, chapter 231—'The school committee of every town shall annually ascertain, *under regulations prescribed by the Department of Education and the Commissioner of Mental Diseases* the number of children three years or more retarded in mental development in attendance upon its public schools, or of school age and resident therein. At the beginning of each school year, the committee of *every town where there are ten or more such children shall establish special classes for their instruction according to their mental attainments*, under regulations prescribed by the department. No child under the control of the department of public welfare or of the child welfare division of the institutions department of the city of Boston who is three years or more retarded in mental development within the meaning of this section, shall, after complaint made by the school committee to the department of public

welfare or said division, be placed in a town which is not required to maintain a special class as provided for in this section. (Approved March 31, 1922.)' "

The two Departments then collaborated in outlining certain regulations dealing with examinations and special class provision. The regulation of the Department of Mental Diseases effecting the provision of a clinic examining system is as follows:

"1. The school committee shall require the examination of all children of school age residing in the town, who appear to be three or more years retarded in mental development. *The examination shall be given by the State Department of Mental Diseases or an examiner approved* by that Department."

It will be observed that this law does two very definite things: *First*, it gives the Department of Mental Diseases (a) the power to actually direct and supervise the work of all examiners of retarded children in the public schools, and (b) in this manner, to legalize the operation of the traveling psychiatric school clinic within the schools. *Secondly*, it makes mandatory the establishment of a special class whenever ten or more children are identified as being three or more years retarded. The enactment of this law removed, to a large extent, the element of chance in the matter of the examination and class placement of retarded pupils. It rendered obligatory the reporting of all retarded children. It also provided a means for their examination by a competent psychiatric clinic, and provided a method of caring for the great majority of the children so examined.

Now that the examinations were legalized, it became necessary to devise some means of conducting them. It was obvious to Dr. Fernald that the two traveling clinics then in operation could not cover the entire State. The difficulty was placed before the Commissioner of Mental Diseases, Dr. George M. Kline, and in 1921, as a result of their collaboration, traveling clinics were created to operate from each of the fourteen* institutions under the Department of Mental Diseases. Dr. Fernald took the personnel of these clinics to his school and trained them in the procedure of carrying out the examination in accordance with his well-known "Ten-point Scale Examination." Dr. Kline saw that the withdrawal of a psychiatrist from the medical staffs of the various hospitals would interfere seriously with the medical work. For this reason he increased the quota of each institution by one physician and one psychologist. The new physicians thus added were not used for the school clinic units. It has been the policy of all mental hospitals to use an experienced psychiatrist for this work. During the first year of operation the school clinic work was done quite uniformly by the assistant superintendents of the various hospitals. From time to time Dr. Fernald repeated his training courses and other physicians became familiar with the system. Since Dr. Fernald's death the training courses have been continued by Dr. Ransom A. Greene, the present superintendent of the Walter E. Fernald State School. The result has been that every mental hospital or State school in Massachusetts has trained three or four physicians for this type of work. Thus, the machinery was created to provide for an adequate State-wide system for the examination of all retarded children.

Dr. Payson Smith, Commissioner of Education, and Mr. A. B. Lord, Supervisor of Special Classes, took active parts in framing the law relating to retarded children, and particularly in outlining and enforcing the regulations which have contributed so materially to the operation of the school clinic system. It is needless to say that without this valued coöperation on the part of the Department of Education it would have been impossible for the school clinic system to attain any degree of efficiency.

When the clinics had been trained in the technique of the complete examination, certain districts were assigned to the State hospitals and State schools. The location of the hospitals and schools from which the clinics operate is outlined in Graph I. It was the intention that each institution should serve the cities, towns and villages nearest to it, and thus minimize the expenditure of time and money through difficulties of travel. However, children in the immediate town or city in which the institution was located were very rarely examined by the clinic of the local institution. It was thought best to bring in a clinic from another hospital and one entirely separated from the local situation.

Certain population difficulties were encountered in so far as the Northampton State Hospital had an extremely large area in the western part of the State. They had to do a great deal of traveling to visit the small schools in the rural areas. This clinic has done very excellent work in carrying its psychiatric service to communities in many quite out-of-the-way places. It will be observed that most of the institutions are in the eastern part of the State. Thus, the traveling clinics within these districts are better able to deal with the population concentration in this section. Most of the State hospitals have a car for the use of the clinic staff while carrying out their duties. In some instances it has been desirable for the clinic to take quarters in a local hotel when operating in a town located some distance from the State hospital or State school.

It may be well to state here that one of the great problems of these educational systems was solved by the providing of a complete psychiatric examination to schools in the rural districts. One can feel assured that the large

*In Jan., 1928, the Belchertown State School placed in operation the fifteenth clinic devoted to this work. Plans for the sixteenth clinic are under consideration at the present time.

cities will recognize the problem of retardation, will provide or secure the services of a satisfactory examining unit, and will organize the necessary special classes. However, numberless smaller communities need help in recognizing their retardates and in outlining a special class program to meet the needs of their smaller school system. The requirements of a community with ten retardates are obviously different from those of the city with two hundred retardates and a special building of twelve classrooms available for this group. What is the smaller school to do about its backward pupils, particularly when they have but three or four children falling in this classification? The need of special provision for these few is of no less importance to the normal children in the same grades than in a large city. Hitherto it has not been possible for the smaller towns and villages to obtain help in this direction. The organization of the school

LEADERS IN THE ESTABLISHMENT OF THE TRAVELING PSYCHIATRIC SCHOOL CLINIC PLAN IN MASSACHUSETTS

DR. WALTER E. FERNALD,
Former Superintendent of the Walter E. Fernald State School.

DR. GEORGE L. WALLACE,
Former Superintendent of the Wrentham State School.

DR. GEORGE M. KLINE,
Commissioner, State Department of Mental Diseases.

DR. PAYSON SMITH,
Commissioner, State Department of Education.

clinic system on a State-wide basis made provision for all communities, large or small. The provision of a competent psychiatric service for the schools of the rural districts is one of the most valuable results of the school clinic plan.

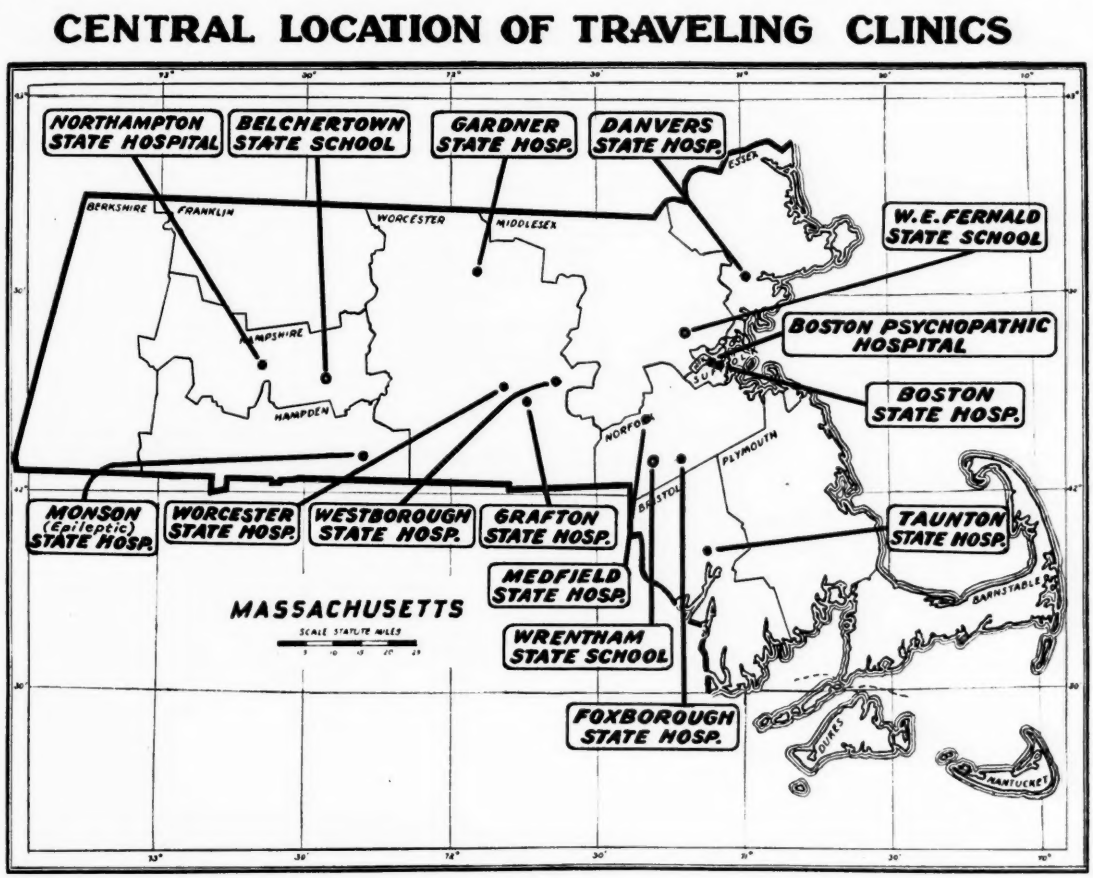
THE FERNALD TEN-POINT SCALE EXAMINATION

At this point we wish to proceed with a description of the examination which was elaborated by Dr. Fernald. He was one of the first to see the urgent necessity for a complete examination of the retarded child rather than one based solely upon psychological tests. Useful as the latter tests were, experience had taught Dr. Fernald that they gave a very incomplete picture of the retarded child as a whole, and nothing of the sum total of his characteristics or of the reactions which might be expected apart from his intelligence. The urgent necessity for obtaining a complete study of the child's inheritance, environment, personal characteristics, physical condition, etc., led him to devise his well-known "Ten-point Scale Examination". Forms were created and printed for each of the points to be covered*. A brief outline of these points is presented.

1. *Family History.* Inquiry is made into the history of the parents, grandparents and other relatives to ascertain the presence of mental disease, epilepsy or mental deficiency. Syphilis and gonorrhea are also recorded, as well as tuberculosis and alcoholism. If there has been a criminal record, the circumstances are investigated. The use of drugs is likewise checked, and any other physical disorders which have played a prominent part in the lives of the parents or other relatives. The pre-natal condition of the mother is inquired into. While the above are of particular interest, other diseases or disorders are made the source of specific inquiry.

The age of both the mother and father at the time of birth of the child, the birthplace of both parents, and the occupation of the father are recorded. A rather extensive investigation is made with reference to the siblings. A notation is made of all miscarriages, stillbirths and siblings. The order of birth is preserved. A record of all deaths is made. We obtain the present age, the present school grade and the intelligence quotient of each of the siblings. The material, of course, gives us definite and valuable information regarding the incidence of mental defect or retardation among the brothers and sisters of the child to be examined.

2. *Personal and Developmental History.* This form traces the history of the child from



GRAPH I.

*A sample set of the fourteen sheets making up this set of forms will be sent to anyone directing a request to the Department of Mental Diseases.

birth. Was the birth difficult, prolonged, instrumental or unusual in any way? A complete history is recorded of all illnesses occurring before the age of 6 years, with particular reference to the period of infancy and up to 2 years. Is there a history of convulsions of any type? At what age did the child begin to walk? At what age did he begin to talk? When did the first teeth appear? At what age did mental peculiarity manifest itself? Was the child backward or peculiar from birth? Did symptoms or peculiarities develop suddenly? These questions are simply a few of the many calculated to indicate the history of the child's early development, with particular reference to the years under 6.

3. *History of School Progress.* Here we endeavor to investigate the progress of the child in his school work. At what age did he first attend school? Has he attended different schools? How long a time has he spent in each school? We then investigate the length of time which the child spent in each grade beginning with the first grade and passing along up to the eighth grade. We try to obtain the opinion of the teacher regarding his school progress and the reasons for his failure. If more than one teacher is available, we obtain information from her also. We request the teacher's information with regard to the child's conduct and behavior in school. Is there a record of truancy, and to what extent? If truancy is present, what is the child's explanation of this?

4. *Social History.* This form outlines data with regard to the environmental conditions to which the child has been subjected. It is desirable to have as much information as possible about the home situation and the neighborhood. A great deal of information can be gained by a study of the child's reactions with his play associates. Does he choose children of his own age, or does he prefer younger children? What are the reactions of other children toward him? Is he a leader? Is he accepted as an equal by other boys and girls of his own age, or is he led by others? An outline is secured of his chief amusements, interests and reactions to play situations. What are the outstanding character traits exhibited? Is he a quarrelsome type, a retiring and seclusive individual, or does he show impulsive trends and emotional instability? On the other hand, is he too obedient and extremely suggestible? Thus, this part of the examination provides us with a study of the setting in which the child lives, his reactions to his environments, and information as to his outstanding characteristics.

5. *Personal Characteristics and Social Conduct.* This portion of the examination is, to a certain extent, closely allied with the preceding sections. It deals specifically with the types of reaction of others toward him. Knowing the basic conditions and the results which might be expected, we now turn to the finished product, so to speak, in the conduct of the child. Has there ever been any evidence of stealing? Does the child lie? If so, does he do this maliciously, imaginatively or purposelessly? What are the child's reactions to matters of sex? Has there been any evidence of abnormal interest or practice in sex matters? If the child is an older girl, we wish to know if there have been any pregnancies. In some of the older boys and girls we find a definite court record. If so, we wish to have a detailed report on these matters.

It is rather difficult to state definite questions which would satisfactorily outline this section of the examination. The great variety of conduct makes it impossible to cover all possible deviations. The social worker, visiting nurse or school nurse, and psychiatrist simply record here the sum total of the child's behavior.

6. *Economic Efficiency.* This form records available data on what is known of the effort of the child to make himself useful. If the child is 14 years or older, we wish to know of any efforts to obtain employment, and the success of these efforts. If the child is under 14, we wish to know whether he makes himself helpful at home, and what his attitude is within the school itself. A great deal of information is gained from a study of the child's attitude toward his home and his willingness to assume a share of the household burdens. If there has been definite employment, we record the kind of work, the wages, the quality of the work and reasons for leaving employment. The opinion of the employer with regard to the child is also investigated. If the child has never earned wages, we inquire into the kind of useful work he is capable of doing in the home or elsewhere.

7. *Practical Knowledge.* This portion of the examination is used to measure the amount of practical knowledge in everyday affairs that the child has absorbed from his environment and associates. There is a great deal of practical knowledge that is valuable to the child, but which is not measurable by ordinary intelligence tests or by school tests which record the acquirement of school knowledge. Many children have an unusual amount of what is known as "common sense," and are able to meet situations which do not necessarily require a high degree of intelligence or school knowledge. It is important to know how a child rates in reference to these facts. Two tests are available, one for younger children and one for older children.

8. *School Work.* This test was devised by Dr. Fernald to record the accomplishment of the child in various subjects by school grade. It presents his actual accomplishment and affords an opportunity to compare his school progress in various school subjects. It is not unusual for the retarded child to be unbalanced

in his acquirement of school knowledge That is, he will do far better in one study than in another. This test shows definitely the subjects in which he needs special coaching as well as the subjects in which he excels. On the completion of this test a chart is made, known as the Correlation Chart. This shows the standing of the child in his various school subjects compared with his chronological age, intelligence quotient and mental age. It outlines the actual accomplishment of the child and the accomplishment which he should show in accordance with his chronological age.

9. *Physical Examination.* The physical examination is made by the psychiatrist. It records the sitting and standing height of the child and also his weight. This form has space for inserting the standard average on height and weight based on age and sex as outlined in the Baldwin-Wood Tables. In this manner an instant comparison can be made. The head shape, length, width and cephalic index are recorded. Vision and hearing are tested by standard examination. Space is provided for recording the findings of examinations of different organs. The physical examination constitutes a very important part of the Ten-Point Scale series. We know that defective children have a large number of physical defects[1, 2] and it is of the utmost importance that those defects which are subject to correction be accurately recorded and reported.

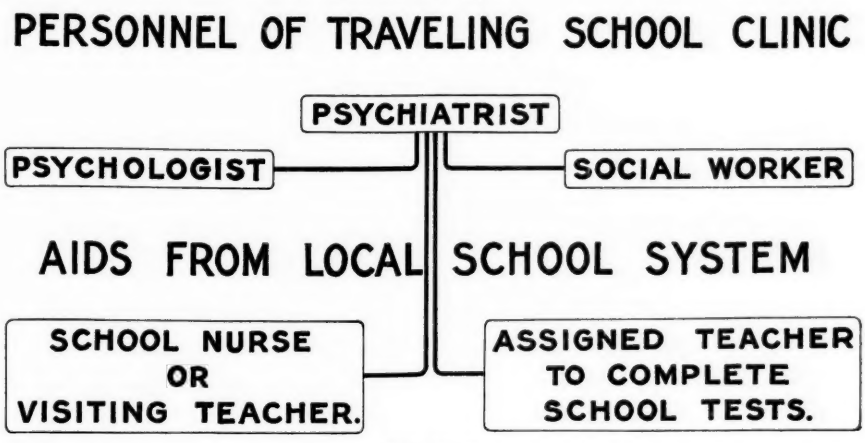
10. *Psychological Tests.* In the original sequence of the various points of the examination, Dr. Fernald placed the psychological tests last, as he disliked the thought of making the examination of any child more or less mechanical. He wished to make sure that it should never be forgotten that the whole child was being subject to review and not simply one particular characteristic. The Stanford Revision of the Binet-Simon test has been adopted as a standard for all clinics, but of course this does not exclude other tests at the discretion of the psychiatrist.

It will be observed that the foregoing information presents a very complete story of the child being examined. It reaches back into his family history, evaluates the parental characteristics, the pre-natal influences, circumstances surrounding his birth, and details of his early life. It studies the early development of peculiarities, the history of his school life and progress, the development of personal characteristics, the influence of the environment, and his general reaction to the various influences brought to bear upon him. Dr. Fernald was very insistent that we could never make a diagnosis of retardation or mental deficiency unless we had a complete review of the child before us. Hasty and unconsidered decisions in reference to the status of retardation or mental deficiency are such important matters that they should never be made without full and complete information being available, and a thorough and careful examination being made.

All of the forms of this school clinic examination are looseleaf and can be distributed to the individual persons conducting the particular examination outlined thereon. At the end of the examination they are re-assembled and presented to the psychiatrist so that a summary can be written, the diagnosis made, and the recommendations recorded.

Personnel of the Traveling Clinic Unit

While various combinations have been tried in perfecting an ideal personnel for the traveling school clinic, one grouping has stood out as eminently satisfactory and that is the one which will be outlined here. The standard personnel at the present time is as follows (Graph II): one psychiatrist, one psychologist, and one social worker. Through arrangement with the school authorities, the clinic also has the services of one of the local teachers, and the school nurse or school visiting teacher. It is necessary, of course, for the clinic to adapt itself to the school situation which it meets. If both the school nurse and visiting teacher are available, the work is made considerably lighter and more rapid.



GRAPH II.

A brief outline of the duties of each person is as follows:

(1) *The Psychiatrist.* The psychiatrist always conducts the physical examination and the mental examination as well. In so far as we plan to have the complete social history available at the time of the examination, the psychiatrist has an opportunity to check over many of the characteristics and reactions outlined in this history. If any particular leads develop, he has an opportunity to follow them through. Children presenting pre-psychotic episodes occasionally appear among the retardates, and it is essential that a very thorough examination of each child be conducted. When the different parts of the examination have been completed and the different reports are available, the psychiatrist assembles all of the data and makes a diagnosis. This diagnosis is based upon the sum total of all information available and not upon results of any one test or group of tests. *It is interesting to observe that quite frequently the diagnosis does not agree with the findings of the psychological test.* In addition to the diagnosis the psychiatrist also makes three groups of recommendations under the following headings: (a) educational; (b) social; and (c) physical.

Through the social worker, school nurse or visiting teacher, an invitation has been previously extended to the parents to visit the clinic at the time of the examination and to confer with the psychiatrist. This is by far the most satisfactory means of getting over to the parents the recommendations which have special reference to the home life, other environmental factors, and the physical conditions needing correction. If the parent is not present it becomes necessary to depend upon the social worker, school nurse or visiting teacher for the purpose of passing along this information to the parents. Every effort should be made, however, to familiarize parents with the purpose and intentions of the examination.

(2) *The Psychologist.* This member of the clinic conducts the psychological tests and also the portions of the examination devoted to practical knowledge. As mentioned before, the Stanford Revision of the Binet-Simon Test is the standard and must be used by all clinics. This does not preclude the possibility of using other tests if the psychiatrist so desires. It is difficult to outline any set duties other than the above. There are certain other details such as assisting in the preparation of the summary which can be very well taken care of by this member of the clinic.

(3) *The Social Worker.* The social worker is usually in the field some time previous to the actual conducting of the examination. This early taking of the social history provides an opportunity for follow-up of certain outstanding leads, all of which should be completed and the data available before the examination by the psychiatrist. It must be mentioned, however, that schools with well-developed organizations and having school nurses or visiting teachers should use these persons in the obtaining of histories rather than calling upon the clinic social worker. The social worker should be saved for the less favored school organizations and for the following up of special leads.

(4) *Assigned School Teacher.* The local superintendent is asked to assign one school teacher to the clinic while it is conducting the examination. This school teacher gives the school tests as outlined in the discussion of "School Tests".

(5) *The School Nurse.* The school nurse has duties which vary in accordance with the organization of the particular school visited. Where the school nurse has had intimate contact with the parents of the children and has home-visiting as one of her duties, it is advisable to make use of this already developed contact with parents and to have the nurse obtain the social history.

(6) *The Visiting Teacher.* The visiting teacher, because of her familiarity with the homes of the children, is a great help wherever available. She assists in obtaining the history and, because of her previous contacts, is very valuable in this work. She may assist in other phases of the examination, depending upon the administrative scheme of the school visited.

It might be well to repeat that no set routine can be outlined in reference to the duties of individuals provided by the local school system. There may be no school nurse or visiting teacher. In this case the work must be taken care of by the clinic itself. One or the other may be available. It is necessary to suit the routine to the possibilities presenting themselves. Progressive school superintendents are more than interested in this work and do everything possible to aid the clinic. Others feel that the clinic, although conducting examinations of their children without cost to the school or town itself, should do the work without assistance. In the first instance the work will proceed very rapidly and the clinic will be able to complete the examinations in a minimum amount of time. In the second instance there will be considerable delay. We have found, however, that the greater proportion of superintendents belong in the first group and are extremely coöperative and appreciative of this service.

As mentioned before, the forms of the Fernald Ten-Point Scale Examination are loose-leaf. This makes it possible to distribute the various parts of the examination to the persons conducting particular portions of the test.

We feel that it is very important to mention the advisability of bringing the school personnel into the clinic work as much as possible. A tactful clinic leader will endeavor to create

interest on the part of the school authorities by drawing them into the examinations and making them feel that their work is a constructive part of the examination. After a few years' observation of the helpful results of the school clinic work, the school authorities become the staunchest supporters of the traveling school clinic idea. At first, however, it was necessary to do everything possible to gain their coöperation and interest. Having them play a part in the clinic examination itself is probably one of the best methods of effecting this result.

On rare occasions it has been found advisable to change the person in charge of the clinic. The contact which this person makes with the public school is of such serious importance in the development of a mental hygiene program that a tactless individual who makes difficulties instead of preventing them should not be continued. This applies to the psychologist and the social worker as well. The mother who has to face the realization of mental disorder in her child has enough of an ordeal to bear without being handled in anything but the most tactful and gentle manner by the person conducting the examination.

The Central Department of Mental Diseases has made a practice of giving instant recognition to the complaints coming to its attention. In fact, a thorough investigation is made of all facts of the case and these facts are placed before the Commissioner for action. We are happy to say, however, that, in the 16 years of operation of the clinic system, such action has been necessary in only a few scattered instances.

Preliminary Procedure of Clinic Operation

We now turn to the actual operation of a traveling psychiatric school clinic. For the sake of simplicity this will be divided into two parts: (a) Preliminary Procedure, and (b) Final Procedure.

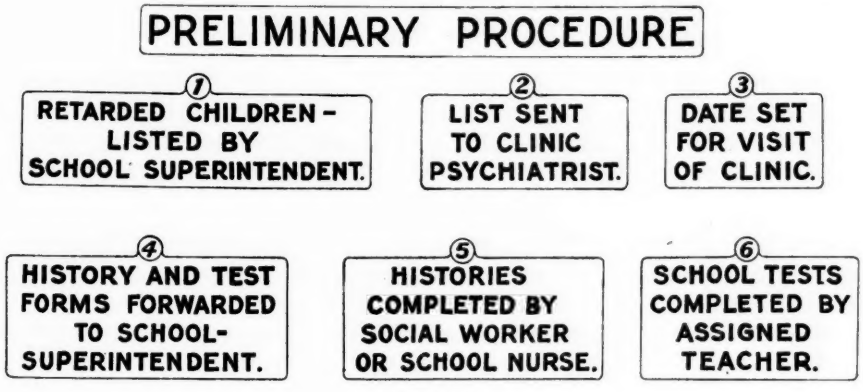
The preliminary procedure is outlined briefly as follows:

(1) *Retarded Child Listed by School Superintendent.* It is a practice of the clinic psychiatrist to write to the school superintendent before the beginning of the school year and request that the list of retarded children be sent to him as soon as convenient. The school superintendent then goes over all the children in his school and selects all children 3 years retarded by grade, or children "appearing to be" 3 or more years retarded. Other children presenting lesser degrees of retardation or specific conduct problems may be included. In these instances the permission of the parents for the examination must be obtained.

(2) *List Sent to Clinic Psychiatrist.* The completed list reporting the chronological age, present grade and any other pertinent data in reference to each child is then sent by the superintendent to the clinic psychiatrist. This gives the psychiatrist an idea of the types of cases which are to be examined, and enables him to estimate the time which these examinations will require and the time which the clinic will spend at that particular school.

(3) *Date Set for Visit of Clinic.* When the clinic psychiatrist has before him the volume of work which must be completed, he arranges his time schedule and sets a date on which the clinic will visit the particular school concerned. If the school superintendent makes a request to have the clinic at a certain date, every effort is made to coöperate. The psychiatrist informs the superintendent as to when the clinic will arrive, and outlines the detail of the examination. When the clinic is visiting a school for the first time, it is to be advised that the psychiatrist or social worker make a preliminary visit to the school and outline for the superintendent the manner in which the various details of the examination are to be carried out.

(4) *History and Test Forms Forwarded to School Superintendent.* The school test forms are forwarded to the superintendent previous to the visit of the clinic. Whenever possible we ask to have the school tests completed and available when the clinic arrives. In situations in which the histories are to be obtained by the school nurse or the visiting teacher, these forms are forwarded also. This part of the procedure makes it possible for a considerable portion of the work to be completed before the actual arrival of the clinic.



GRAPH III.

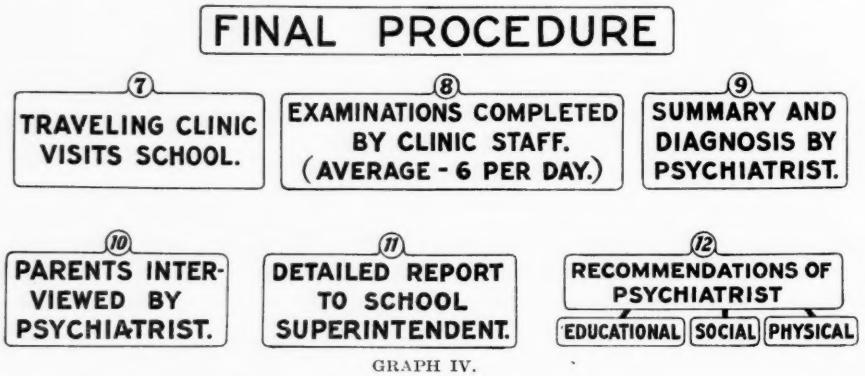
(5) *Histories Completed by Social Worker or School Nurse.* If a school nurse or visiting teacher is available for the taking of histories, a special request is made that the information be obtained before the clinic arrives on the scene. It may be well to say that, in this event, the school nurse or visiting teacher is instructed during the preliminary visit of the psychiatrist or social worker as to the exact information desired. Whenever a school nurse or visiting teacher is not available, the social worker of the clinic proceeds to visit the school to obtain the preliminary data and investigate the social histories. Sometimes it is impossible to obtain these until the clinic has completed its visit. This is particularly unfortunate as it delays the forwarding of the diagnosis and recommendations, but at times it is unavoidable. A great effort is made, however, to preserve the clinic routine in reference to histories as outlined in the first part of this section.

(6) *School Test Completed by Assigned Teacher.* Some schools prefer to wait until the clinic visits the school before assigning a teacher to the clinic work. In this case the school test material is gone over with the assigned teacher and she then completes the school tests on all children to be examined during the visit. Detailed instruction sheets for this test are available.

As mentioned before, the above outline presents the procedure which has proved to be most successful. Other situations arise which make it necessary to have the clinic routine conform to local conditions. These are met with in the best manner possible, depending upon the particular situation.

Final Procedure of Clinic Operation

The final procedure (Graph IV) has to do with the actual visit of the clinic itself and, in so far as these details are continuous, they are numbered as following the outline of the "Preliminary Procedure."



GRAPH IV.

(7) *Traveling Clinic Visits Schools.* On the date appointed the traveling clinic personnel appears at the individual school and is assigned quarters by the school superintendent. Wherever possible, a location in the quieter portions of the school is highly desirable as all of the tests are much more satisfactory when the child and the examiner can be alone and uninterrupted. The coming of a clinic should be attended with as little commotion as possible and the examination should not be made into any unusual procedure. The best results are obtained when the clinic examination is treated simply as a special form of test, and everything should be done to prevent any obvious singling out of the retarded children. The psychiatrist should be given opportunity for a private interview, with the child, which should not be hurried under any circumstances.

(8) *Examinations Completed by Clinic Staff.* We have found that the clinics can complete an average of six examinations per day. This is possible only because of the fact that several persons are working on different parts of the examination at the same time. Thus, the psychiatrist, psychologist, social worker and assigned teacher can be engaged with four different children at the same time. Of course, difficult cases are encountered at times and it is not possible to maintain this working average. No attempt is made to hurry the examinations, and if extra time is required it is taken. In some cases this means that the visit of the clinic to the next town on the list may be delayed for two or three days. A letter is then written apprising the other superintendents of the necessary change, and arrangements are made accordingly. Some clinics arrange their time so that they plan to work but four days a week. This makes available an extra day in the event that the clinic work is delayed for any reason. As has been said before, no effort is made to hurry the examination. Quite frequently it takes more than a single day to complete the work on a specific case. Nevertheless, the volume of work to be done is so arranged that all members of the clinic are occupied throughout the day.

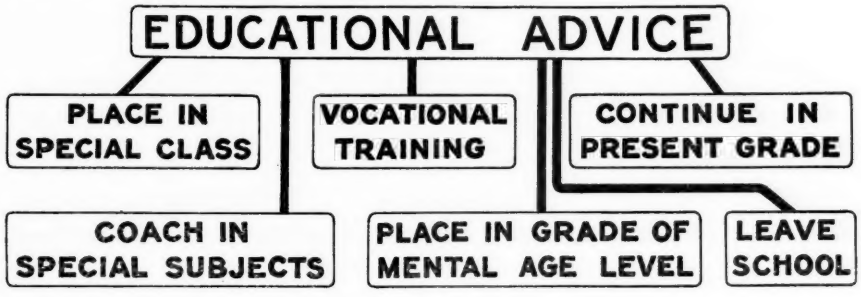
(9) *Summary and Diagnosis by Psychiatrist.* When the entire examination has been completed, the results of the various tests are assembled by the psychiatrist and a diagnosis made. This diagnosis does not depend upon the results of any one test, but is the result of a complete survey of the child's life. It does not

begin with his birth, but goes even farther back to the factors of heredity, pre-natal influences, existing birth conditions, complete history of life from birth to the age of 6 years, school development, personal characteristics and general reactions to environmental stresses. A diagnosis made on less complete information would not be worth the paper upon which it was written. However, even with this complete information available it is sometimes difficult for the psychiatrist to reach a conclusion. In about 5 per cent of all cases examined the diagnosis is deferred until a subsequent visit of the clinic.

(10) *Parents Interviewed by Psychiatrist.* Whenever it is possible the parents are interviewed and an effort made to acquaint them with the results of the examinations. This is one of the most important points in the clinic procedure. Parents must appreciate their responsibility with regard to future adjustments which may be necessary for the child's well-being and progress. In many cases the psychiatrist finds that the parents have been more at fault than the child. In these situations a personal interview is the only possible way to clear up the difficulties and outline a method of procedure for the future. Without venturing any criticism, it may be said that some parents seem too willing to place the entire responsibility for the child's education upon the school system. Many have a singular lack of understanding of their personal responsibility in the child's success or failure in school work. The interview with the parents is of the utmost importance and should be stressed in every case. The school authorities are able to proceed with far greater confidence in their plans for the correct placement of the individual child if the parents fully understand the intent, purposes and results of the examination. Unhappily, many parents have tried for years to avoid facing the fact of mental retardation in their child. The greatest value of the interview is to impress upon their minds the exact mental status of the child and to stress the need for *parental* aid and guidance in the child's adjustments.

(11) *Detailed Report to School Superintendent.* At the conclusion of the examination a complete report is made to the school superintendent. For obvious reasons the facts in reference to the family history and details of heredity are omitted. In addition to the typed 5x8 card which contains this information, a copy of the correlation chart is included (Graph VII). This places before the superintendent the findings of the various portions of the examination, and contains recommendations not only in the educational field but the social aspects of the findings and the results of the physical examination as well. Usually these cards are filed in the superintendent's office. Where the child has been recommended for a special class, the copy of the correlation chart is placed in the hands of the special class teacher. This enables the teacher to observe at a glance the standing of the child in his various school subjects, and indicates the high points in his accomplishment and the subjects in which he needs special coaching.

(12) *Recommendations of Psychiatrist.* The recommendations of the psychiatrist comprise the final stage in the examination. In so far as this phase of the examination is of great importance it will be discussed briefly, and the recommendations outlined according to the classifications into which they fall.



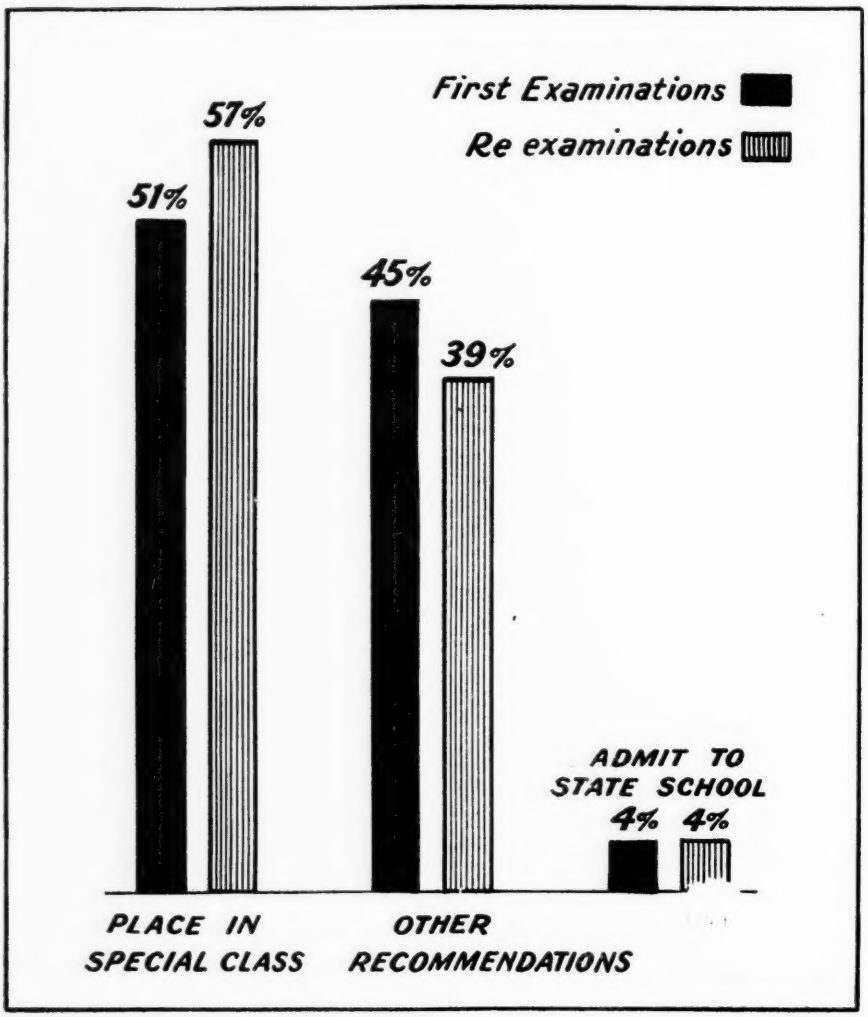
GRAPH V.

(a) *Educational Advice.* Educators are particularly interested in one problem: What are we to do with this retarded child? He has not shown satisfactory school progress. What is the best way of handling the problem? In Graph V are outlined some of the commoner forms of advice given under this heading. It is impossible to give other than a very general view of the type of advice given, as each case presents individual differences. Thus, the recommendations will necessarily differ. These general statements are given as a means of outlining the approach to the problem of educational advice and can in no manner be considered as specific.

In approximately 50 per cent of cases coming up for examination, the educational advice is "Place in special class." It is rather surprising that this percentage is not larger. Nevertheless, it is satisfying to observe that a blanket solution is not being used for all problems presented to the clinics. Nearly half of the cases referred for examination may be taken care of in other ways than by placement in special classes.

Graph VI gives the psychiatrist's recommendations in reference to special class placement for the year 1930. Among the 5,224 first examinations we note that 51 per cent were recommended for placement in special classes. Of the 1,303 re-examinations, 57 per cent were recommended for special classes. The recommendations for special class care are higher in the re-examinations owing to the fact that adjustments previously recommended could not be effected and a special class placement became necessary finally. It is rather surprising that but 4 per cent of both first examinations and re-examinations were recommended for admission to a State school for mental defectives. This shows that the public school retardate does not possess the characteristics which have been considered necessary for admission to an institution. It also shows clearly that retardation in our public schools is primarily an educational problem and not an institutional problem. It is rather encouraging to note that recommendations other than admission to a State school or placement in special class made up 45 per cent of the total recommendations among the first examinations, and 39 per cent of the total among the re-examinations. This means that other forms of adjustment were possible in a large percentage of cases. The factor of this large percentage of borderline cases hovering between the average school grade and special class placement clearly indicates the necessity for *flexibility in the school curriculum for the various grades.* A rigid routine was entirely unsuited to the needs of these children. We have demonstrated here *the great need for a course of study and an administrative method suited to individual deviations and not one which will force all children into a standard routine.*

PSYCHIATRISTS' RECOMMENDATIONS, FIRST EXAMINATIONS AND RE-EXAMINATIONS, 1930.



GRAPH VI.

In certain cases the solution is made by placing the child in a grade to suit his mental age level. It should be remembered that while we are dealing in the main with children three years retarded, the clinics also have the privilege of examining children of lesser degrees of retardation if the permission of the parents has been obtained. Children with retardation of less than three years may present situations which are less serious, and an adjustment is sometimes made by dropping the child back one grade or possibly two grades. Again it must be remembered that the characteristics of the individual case determine the advice to be given.

Some children present a decided imbalance in their acquirement of school knowledge and need coaching in special subjects. We quite often find children who are doing fairly well and who may even show an acquirement of school knowledge above their mental age level in certain subjects. In other subjects, however, they are decidedly below the expected degree of accomplishment. The mentally deficient tend to show a surprising imbalance in their acquirement of school knowledge. We can strike general averages for accomplishment, but we find that these are only approximate and do not give us a picture of the situation as a whole. This tendency to be high in one subject and low in another makes it possible in cases of lesser degrees of retardation to keep the child in school classes with a little extra work on subjects in which he has difficulty. He should be kept in regular school classes if there is any likelihood of his succeeding even after considerable adjustments have been made.

The imbalance in acquirement of school knowledge is outlined for a specific case in Graph VII. This case was selected at random, and presents several unusual characteristics. This boy presented a chronological age of 12 years, and under normal conditions would be found in the seventh grade. He had a mental age of 8 years, an intelligence quotient of .66, and was placed in the second grade. In his school subjects, however, he could do second grade work in spelling and language, third grade work in reading and in geography, and fourth grade work in arithmetic and writing. Here we have the rather unusual situation of a mentally defective boy placed in a school grade which was definitely under his potentialities. That is, he could do second grade work in two subjects, third grade work in another two subjects, and fourth grade work in arithmetic and writing. This is rather an atypical case, however, as the great majority of cases are over-placed in school grade rather than under-placed. Although this boy had never

Form 3.

D M. D. Form A-101

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DEPARTMENT OF MENTAL DISEASES

SCHOOL CLINIC RECORD

CORRELATION OF CHRONOLOGICAL, MENTAL AND SCHOOL AGE

NAME DOE, JOHN DATE May 14, 1931 NO. 1013

CHRONOLOGICAL AGE	I Q	MENTAL AGE	SCHOOL GRADE FOR PRESENT CHRONOLOGICAL AGE	SCHOOL GRADE WORK FINISHED					
				READING	ARITHMETIC	SPELLING	WRITING	GEOGRAPHY	LANGUAGE
16		16	H. S. II						
15		15	H. S. I.						
14		14	J. H. S.						
13		13	VIII						
12	.66	12	VII						
11		11	VI						
10		10	V						
9		9	IV						
8		8	III						
7		7	II						
6		6	I						
5		5	Kinder-garten						
4		4			Present School Grade II				

GRAPH VII.

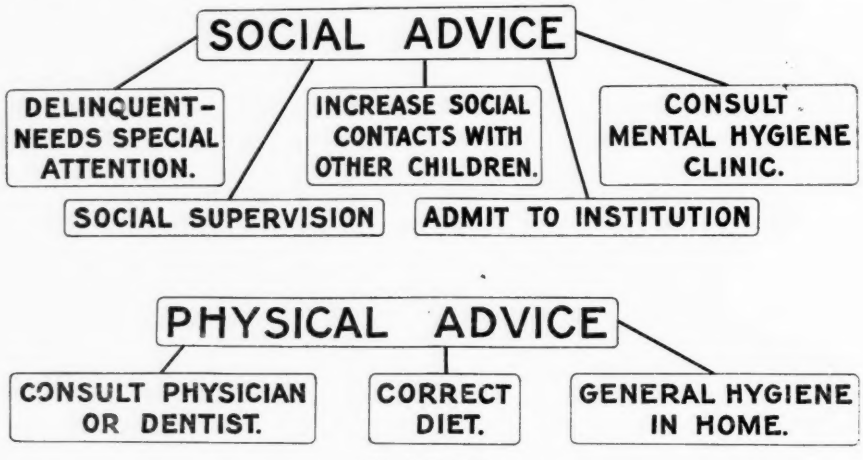
progressed beyond the second grade, he had acquired knowledge in his school subjects which enabled him to pass third grade tests in reading and geography, and fourth grade tests in arithmetic and writing. A copy of the correlation sheet as outlined in Graph VII is presented to the superintendent with the detailed report of the examination. This chart is of particular interest to the teacher who takes charge of the boy in readjusting his school work.

Some children seem to have great difficulty in making continued progress in the regular school curriculum. It is highly advisable that these children be given training with the thought of preparing them for the time they will leave school. Again we encounter certain definite types who are particularly unsuccessful with the regular school work but seem to be unusually well qualified for manual training and work of a mechanical nature. As mentioned before, the high points in the child's characteristics should be developed to their utmost. If he shows interest and any degree of accomplishment in vocational work, develop this trend and waste no further time and effort on the standard school subjects corresponding to his mental age.

A certain number of children are encountered who are obviously not adjusted in school. They may be large, well-developed, and may have absorbed all that the school has to offer in vocational training. If the personal characteristics are such that there is a good chance of the child's getting along in the community, it is often best to advise that he leave school and attempt to secure employment or be occupied at home or in his father's business. Many of these cases are obviously misplaced in school, and yet have such excellent general characteristics that community adjustment appears to offer the greatest chance for success. The great hulking boy of 15 who loves to work on a farm makes little progress and is decidedly unhappy when kept in a special class with younger and smaller children. The above problem does not present itself in the larger cities where the opportunity for rigid classification of special class pupils by chronologic age and sex is present The smaller schools, however, and they are in the vast majority, find this problem of classification a very difficult one.

(b) *Social Advice.* Again it is difficult to present any particular types of social advice which are used more often than others. However, there are several which are of particular value and will be mentioned with the reservation that they cover but a small section of the field.

The crying need at the present time is for social supervision of the retarded child. This is not necessary in all cases, but the psychiatrist repeatedly meets situations in which the lack of parental interest and understanding plays such a large part in the child's lack of adjustment that some means of social supervision is an urgent necessity. The visiting teacher is the obvious answer to this troublesome problem, but she is available in only a few schools at the present time. In some school systems the school nurse has been trained to exercise a certain amount of supervision. This is good so far as it goes, but it does not go far enough. The fact which faces us is this: Many children are falling behind in their school classes because of the fact that they lack a little intelligent interest in their lives. At the present time there is great need for an adequate follow-up of all retarded children, and particularly children in special classes. This, of course, should include the equally important problem of the supervision of retarded children after they have left special classes. It may be of interest to know that there is a bill before the Massachusetts Legislature at the present time which will provide for an investigation into the feasibility of establishing some means for social supervision of special class pupils and social supervision of children leaving special classes up to the time that they reach 21 years of age. These great needs have become so obvious during the



GRAPH VIII.

sixteen years of school clinic operation that it is felt that the time has arrived for the initiation of this work, expensive though it may prove to be.

There are certain types of children who show delinquent tendencies, and who need special attention. Here the social supervision must be more exact in its supervisory capacity. While the numbers coming in this group are rather small, it is felt that they present such potentialities for future difficulties that a great effort should be made while the child is young to guide his footsteps into the proper channels. The traveling school clinic has had the opportunity of seeing the child on subsequent visits to the school, and re-examinations are made quite frequently. However, such social supervision as is possible through an occasional visit by the over-worked social worker, the excellent work of the few visiting teachers available, and the rare situations in which the school nurse can be helpful in this capacity, do not begin to touch the needs of the problem as a whole. We desperately need a thoroughgoing organization, or at least additions to our present personnel in order to meet this trying situation.

It is almost impossible to discuss any of the phases of social advice without referring to the need of greater social supervision. We find that certain retarded children have a tendency to withdraw from the group and to isolate themselves to greater or less degrees. These children should be taught to increase their social contacts with other children. There should be greater opportunities for play and a more rounded-out life of activity.

In all schools the psychiatric clinic finds certain types of children who present definite behavior problems or personality deviations which cannot be adjusted through any change in the educational program or through environmental or social readjustments. In a certain percentage of these cases we find it necessary to advise that the child be taken to the nearest mental hygiene clinic and kept under its supervision. All of the institutions under the Department of Mental Diseases have clinics scattered throughout the surrounding areas. It is not difficult to place the child on the books of one of these clinics and thus secure the benefit of advice and available social supervision. Certain types of children showing pre-psychotic episodes should by all means have the advice of the nearest clinic throughout the year.

As has been previously stated, a comparatively small percentage of retarded children are recommended for admission to a State school. For example, of all children examined for the first time during the year 1930 we found that 3.5 per cent of males and 5.7 per cent of females were recommended for institutional care. These figures are rather striking and show us at once the great gap between the retarded child in the public schools and the retarded child admitted to our institutions. The fact that we find mental retardation in our school children, and but 4.2 per cent of them need admission to a State school, shows the marked difference in type between the institutional retardate and the public school retardate.

(c) *Physical Advice.* The tendency of retarded school children to show an unusual number of physical defects was discussed previously. The physical condition of our children is such that 65 per cent of them are advised to consult a physician or a dentist immediately. While a considerable number of cases require dental care, the majority of children have physical defects for which the immediate care of a physician is advisable (Graph VIII).

The food habits of various racial groups and individual peculiarities in the outlining of diet quite often present situations which are frankly unbelievable. Many parents are quite surprised to learn that their child's diet is wholly unsuited to him and that his present physical situation is in any way dependent upon deficiencies in the preparation and variety of foodstuffs. One working mother gave her boy coffee and rolls for breakfast, and cake and tea for supper. These meals he took with her. She then gave him 35 cents with which to purchase his noonday meal. This the boy expended on candy and ice cream. The mother was a little indignant when it was drawn to her attention that this diet was hardly suitable for an active boy of 12 years. In her opinion the fact that he was underweight, undernourished, feeling below par physically, and obviously failing in his school classes, could not be dependent upon his diet. Numerous other cases present rather startling facts in reference to the diet deficiencies in many homes which are considered as average for the general community. Thus, it is quite within reason to expect that the general hygiene of the home may be below average. As a matter of fact, in many instances it is necessary to instruct people in the quite elementary rudiments of personal hygiene. In our modern and enlightened age it would seem impossible to find a home in which the tooth-brush was unknown, or one in which such a common article as soap was practically non-existent. Yet this is not at all uncommon. It has been found advisable to take very little for granted but to find out the existing conditions and do everything possible to relieve or correct those which are having an inevitable effect upon the retarded child.

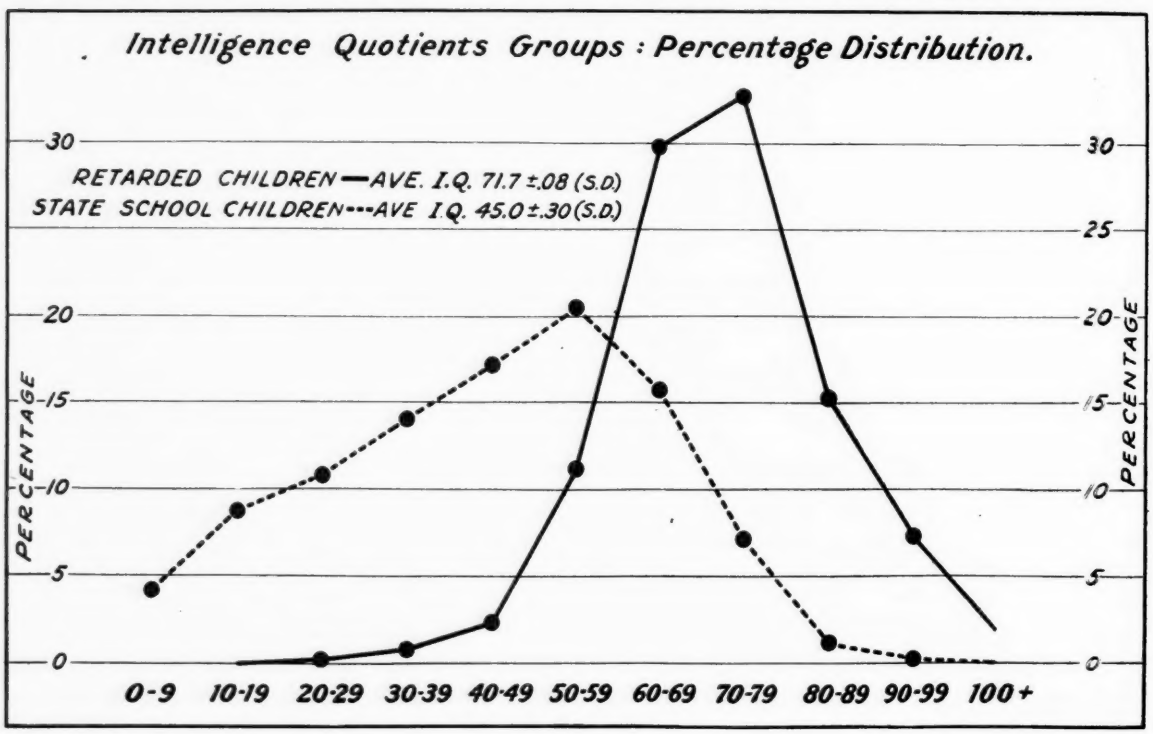
THE INTELLIGENCE OF RETARDED SCHOOL CHILDREN COMPARED WITH INTELLIGENCE OF CHILDREN IN STATE SCHOOLS

In the preceding section we mentioned the striking differences observed in the type of child examined by the traveling school clinics as compared with the type of child admitted to our State schools. The differences in personal char-

acteristics as well as intelligence are very unusual. To discuss these personal differences would be decidedly beyond the scope of this communication. However, we wish to present a comparison between the intelligence quotients of children within State schools and the intelligence quotients of retarded children in the public schools.

Graph IX outlines this material on the totals and throws considerable light on the possible reason for these differences. The average intelligence quotient in the first examinations of

INTELLIGENCE OF 20,473 RETARDED PUBLIC SCHOOL CHILDREN IN MASSACHUSETTS AND OF 3,941 CASES IN RESIDENCE IN MASSACHUSETTS STATE SCHOOLS ON SEPTEMBER 30, 1929.



GRAPH IX.

contain greater proportions of lower grade cases, while children presenting higher degrees of intelligence are within the public school systems. This graph shows us in a most convincing manner the cardinal differences between the two groups, or the radically different problem associated with retardation which must be met by the public schools. With 3,941 children filling our State schools to capacity, it is quite obvious that there is no room for an additional 20,000 now within the public schools. Dr. Fernald was one of the first to say that, to a large extent, the mentally retarded child must be a problem of education and that adequate provision for his school training should constitute one of the major problems of the field of education. Our facts support this statement in a most convincing manner.

20,473 retarded children who were examined between 1921 and 1930, inclusive, was 71.7±.08 (S.D.). The average intelligence quotient of 3,941 children in residence in State schools on September 30, 1929 was 45.0±.30 (S.D.). The difference between these two average intelligence quotients is 26.7 points of the I.Q. scale. The standard deviation of the difference is ±.31.

The intelligence quotients of children in State schools predominate in the I.Q. groups 0-.59 with the largest number, 20 per cent of cases, occurring in the I.Q. group .50-.59. Public school retardates, on the other hand, have intelligence quotients which predominate in the groups .60-.99 with the largest number, or 38 per cent of cases, occurring in the I.Q. group .70-.79. It is obvious that the State schools

Quite decided sex differences are noticed in both the State school and public school groups (Table A). Among the State school children, males predominate in the I.Q. groups 0-.39, presenting 41 per cent as compared with 34 per cent for females. There is a shift in this relative position for the I.Q. groups .40-.69. Here the males present 48 per cent while the females present 58 per cent. Again there is a sex change in the I.Q. groups between .70 and 1.00, the males presenting nearly 10 per cent, and the females but 7 per cent. It appears, then, that

State schools have large proportions of low grade and high grade males and smaller proportions of the I.Q. groups between .40 and .70. The females, however, present relatively fewer low grade and high grade cases but a decidedly larger proportion of the middle grade cases with intelligence quotients between .40 and .70. It will be observed that the sexes are divided fairly evenly as to numbers. Of the 3,941 children in State schools in 1930, 1,980 were males and 1,961 were females.

TABLE A

I. Q. Distribution in 20,473 First Examinations of Retarded School Children, 1921-1930, and in 3,941 Children in Residence in All State Schools September 30, 1929, by Sex

Intelligence Quotient Distribution

		Total	0-.09	.10-.19	.20-.29	.30-.39	.40-.49	.50-.59	.60-.69	.70-.79	.80-.89	.90+	Aver.	S. D.
First Examinations of Public School Retardates														
Male	Number	13,296	—	—	40	90	285	1,348	3,719	4,442	2,236	1,136	72.7	±.11
	Per Cent	100.0	—	—	.30	.67	2.14	10.14	28.00	33.42	16.83	8.54		
Female	Number	7,177	—	—	20	80	201	957	2,394	2,259	893	373	70.0	±.14
	Per Cent	100.0	—	—	.26	1.11	2.80	13.32	33.38	31.48	12.45	5.0		
Total	Number	20,473	—	—	60	170	486	2,305	6,113	6,701	3,129	1,509	71.7	±.08
	Per Cent	100.0	—	—	.29	.83	2.36	11.27	29.87	32.77	15.29	7.34		
Intelligence Quotient at Admission, All Cases in Residence in State Schools														
Male	Number	1,980	82	210	233	302	318	364	277	157	32	5	44.0	±.44
	Per Cent	100.0	4.14	10.61	11.78	15.25	16.06	18.37	14.00	7.93	1.61	.25		
Female	Number	1,961	86	136	195	253	356	446	344	125	17	3	46.0	±.42
	Per Cent	100.0	4.38	6.93	9.94	12.90	18.16	22.76	17.55	6.37	.86	.15		
Total	Number	3,941	168	346	428	555	674	810	621	282	49	8	45.0	±.30
	Per Cent	100.0	4.26	8.28	10.86	14.08	17.10	20.55	15.75	7.15	1.24	.20		

The intelligence quotient distribution of the two sexes among the public school retardates also shows marked differences. In this group large proportions of females are found in the low I.Q. groups. We note that the males present 41 per cent in the I.Q. groups between .20 and .69 as compared with 50 per cent for the females. That is, it appears that so far as our public school retardates are concerned, the females show a greater amount of mental defectiveness (feeblemindedness) than do the males. For the I.Q. groups .70-1.00 we note that the males present 58 per cent as compared with 50 per cent for the females. It would seem that more males of high mental grade have difficulties in the public schools than females of comparable mental ratings.

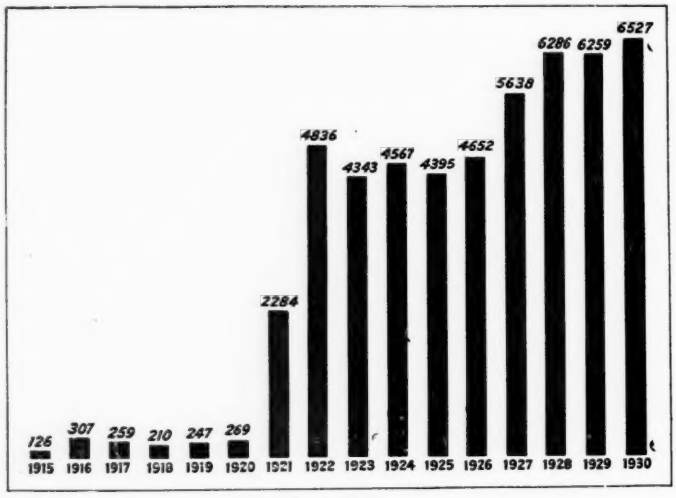
In considering these results it must be recalled that the sexes are not evenly divided as they were in the State school cases. Of the 20,473 retarded children, 13,296 were males and 7,177 were females. It has been suggested that the boys present more conduct problems than the girls and that these behavior difficulties contribute to their retardation in school, the result being that correspondingly larger numbers of males are referred to the clinics for examination. If conduct in itself is the answer, it is rather surprising that a larger number of males are not recommended for institutional care. In 1929, for example, 2.8 per cent of all first examinations of males were recommended for admission to a State school while 4.1 per cent of females were recommended. It may be assumed that environmental and social stresses are the same for both sexes. With conduct and environment playing lesser rôles in this sex difference we are forced to turn to other possibilities. There appears to be some factor in the characteristics or adaptability of males which renders their adjustment to the school curriculum more difficult than for the females. There is a possibility, of course, that the school curriculum, or the scheme of school administration, may be better suited to the needs of girls than boys. Whatever the cause, boys seem to find it more difficult to adjust themselves to the life period spent within the public schools, and they become retarded in school work in practically a 2:1 ratio as compared with girls.

Growth of School Clinic Movement

Every activity which renders a public service is faced at one time or another with the question "Are we covering the field adequately? Are the greatest number of persons possible receiving benefit from our contribution?" New social activities have two courses open to them. They may decide to cover a large field and project their services to every person needing help, or they may take the narrower course of action and decide to present a specialized type of service to a few highly selected cases. The question of policy in this situation is an extremely important one. In providing a service for the examination of retarded and problem children, it is very necessary that a plan be adopted which will insure the extension of the clinic service to every child needing this examination. Many clinics start out with the best of intentions but become so enmeshed in the details of a complex examination that a restriction of the scope of their activities is inevitable.

The passion for completeness of detail is very commendable. However, the practical side of the question must be considered. At the present time we find the almost universal acceptance of the thought that the ideal for a child clinic should be the thorough and complete examination of a few cases. This spirit is laudable, but unhappily it does not tell the story of thousands of children who desperately need the help of that clinic and who, because of the avowed administrative policy, cannot receive it. Thus, we see clinics devoting months to the study of a single case and costs running up as high as $500 per child examined. This method and the attendant expenditures would be justified if worthwhile results could be guaranteed. However, to our surprise we cannot find that these clinics are showing any better results than others. In dealing with children this is not hard to understand. The complex assortment of characteristics found in the average child, plus the infinite variety in environmental pressures, rarely result in a single fixed problem but rather in a bewildering kaleidoscope of fading and newly developing problems which change from month to month—we may say from day to day. The problem which was settled satisfactorily last week may have no relationship whatsoever to the problem which is to develop next month. Thus, the application of a static methodology to a dynamic problem may provide improvement in the problem of the moment, but no guarantee of protection from future difficulties. The answer lies in the providing of a continuation of service. We must be ready to help again and again as new problems arise; to provide a life-long supervision if necessary and not a concentration of interest for a few months only.

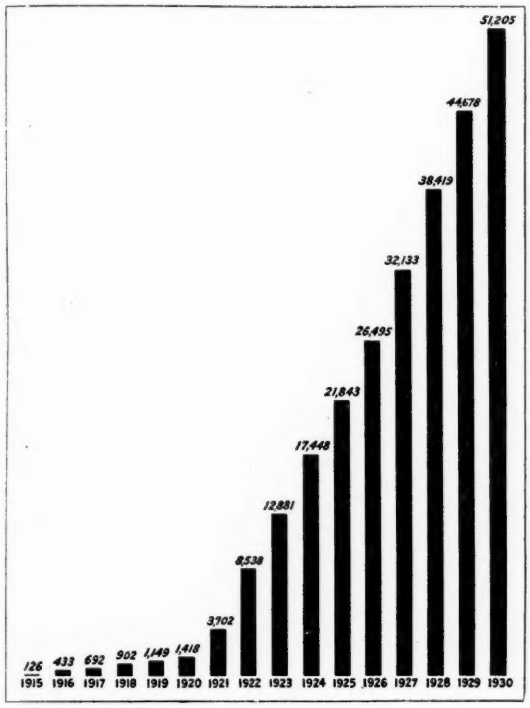
When the clinic of the Walter E. Fernald State School first examined 126 cases in 1915, it is doubtful if Dr. Fernald foresaw that this problem would expand itself in such gigantic proportions that machinery would have to be devised to examine over 6,000 retarded children each year. But he did not set out with any preconceived idea that his work was to be confined to a small, highly specialized field. His plan was to examine *all* retarded children, and when he said this he meant every retarded child in the public schools of Massachusetts. When he saw that his own clinic could cover but a small field he created the organization to provide a State-wide examining system to function throughout the public schools of the Commonwealth. This was no small task. He standardized the examination which, while complete and covering all fields, was not so complicated that its cost would be prohibitive.



GRAPH X.
Number of School Clinic Examinations, 1915-1930.

As stated before, the first traveling clinic in Massachusetts became operative on December 15, 1914. During the remainder of that year and 1915, 126 cases were examined. As the movement gained impetus, still larger numbers were examined. Graph X outlines the total examinations for each year for the period 1915-1930. In March, 1921, twelve additional clinics were added to the two already operative, and we see an increase in the number of examinations to a total of 2,284 for the year. Between 1921 and 1930 the number of examinations increased rapidly to 6,527 for the year 1930. These increases have far exceeded the natural growth which would be expected by normal increases in the school population. In reviewing Graph X we notice that the number of examinations seems to be more or less stable since 1928. It would appear that something over 6,000 examinations of retarded children per year is to be expected by our clinic system in Massachusetts in future years. In other words, approximately 1.5 per cent of our grammar school populations will be referred to clinics each year because of retardation. The public schools themselves face the problem of having to provide special classes for approximately

3,000 children each year. Because of the large numbers of children coming up for examination we see the tremendous size of the problem. We cannot say that the needs of any portion of these retarded children are greater than the needs of any other part. The entire group is made up of children who are having difficulties in adjusting to school life, and all are in need of and deserve the same degree of consideration if we are to preserve our ideals of justice or impartiality in the distribution of public moneys. Social betterment depends upon the elevation of the mass and not upon the elevation of selected individuals or components of that mass. It must be conceived on the broad basis of help and guidance for all. Social planning of the right type incorporates as a cardinal principle the thought that all individuals have the right to be assisted to their highest level of accomplishment. True leadership consists in teaching the many the way in which they may rise to a full realization of their powers and characteristics.



GRAPH XI.
Cumulative Graph of School Clinic Examinations, 1915-1930.

While the clinics during 1930 examined 6,527 children, it is evident that this is not all. The great majority of these children exhibited some degree of retardation. In addition there are many other problem children not coming under the scope of the school clinic law who need help and advice. It should be the function of the clinic to care for all types of problems brought to its attention. At the present time there is a bill before the Massachusetts Legislature amending the present school clinic law so that a school superintendent may refer any child to the school clinics whether or not retardation is present. This is one of the most progressive moves made by psychiatry in education for many years. It increases the scope of the traveling clinic tremendously by adding adjustment problems to the present duties.

Graph XI presents the total examinations conducted by all of the clinics during the period 1915-1930. This is cumulative in that it shows the total examinations which were completed at the end of any particular year. That is, at the end of 1920, 1,418 examinations had been completed; at the end of 1925, 21,843 examinations had been completed; while at the end of 1930, a total of 51,205 examinations had been conducted by our school clinic system. Some of these, of course, are re-examinations. We find that approximately 20 per cent of this total, or 10,000 examinations are re-examinations, and approximately 41,000 are first examinations. In a rather striking way this graph shows the magnitude of the problem of the retarded child within the public school, and demonstrates the great volume of work which has been accomplished by these clinics.

COSTS OF TRAVELING SCHOOL CLINICS

I understand that the citizens of Portland are thinking of establishing a highly technical child clinic at the present time. It is estimated that this clinic will be rather expensive. In so far as I have been questioned repeatedly regarding the cost of operation of the school clinics, it may not be amiss to mention our findings in reference to expense. We are here giving the average cost of examinations under the school clinic system for 1928, 1929 and 1930.

TABLE B

AVERAGE COST OF SCHOOL CLINIC EXAMINATIONS FOR 1928, 1929 and 1930

1928	1929	1930
$5.50	$4.95	$5.44

Table B outlines these data. This cost has not been calculated in detail, but includes the main items of expense. Expenditures for salaries, maintenance, travel, hotel, meals, incidentals, automobile expense and supplies are included. There is a small item in connection with clerical services which could not be included in the above item owing to the fact that it was confused somewhat with institutional duties, and an accurate time record had not been kept. It is safe to say, however, that the added expense would not increase the average more than fifty cents per examination. The total expense for the operation of fifteen clinics examining a total of 6,527 children during the year 1930 was $35,149.76. It should be recalled that this is

for the operation of *fifteen* clinics and not one clinic. From the financial viewpoint it seems that the school clinic system is not unduly costly, nor does it result in financial expenditure which could be considered at all unreasonable.

SUMMARY

I. The present high position which Massachusetts occupies in the care of the mentally deficient is due largely to the pioneer work of Dr. Walter E. Fernald. Over thirty years ago he realized the urgent need for public recognition of the problem of mental defect and the necessity for early diagnosis of cases showing mental retardation. His first plan was the creation of an out-patient department at his school in Waverley to examine, diagnose and render advice in cases referred from the community.

With the growth of knowledge on the problem of mental deficiency, educators began to look for some reliable method of diagnosing cases of retarded children in the public schools, and appealed to Dr. Fernald for assistance. Dr. Fernald then conceived the thought of projecting his out-patient examination into the public school system, and devised a plan whereby his out-patient clinic would become a traveling unit and visit each school, conducting a comprehensive examination of the retarded children therein. The first of these units was inaugurated on December 15, 1914, and the second in 1917, under the late Dr. George L. Wallace.

II. Requests for the service of the clinics increased rapidly. The growing number of retarded children in the public schools showed that special provision was urgently needed. Through the coöperation of Dr. Fernald with the Department of Mental Diseases and the Department of Education, a law was enacted in 1919 legalizing the operation of the traveling clinics and *requiring* the establishment of special classes in each town having ten or more children who were three years retarded in school classes. In addition, the Massachusetts Department of Mental Diseases was given authority to conduct or supervise the examinations.

In 1921, traveling clinics were created to operate from each of the fourteen institutions under the Department of Mental Diseases. The personnel of these clinics was trained in the procedure of carrying out Dr. Fernald's "Ten-Point Scale Examination." Certain districts were assigned to each State hospital and State school in which their clinics should operate.

III. The "Ten-Point Scale Examination" consists of a series of loose-leaf forms. It presents a detailed picture of the retarded child, giving the sum total of his characteristics and reactions apart from his intelligence. The factors studied are as follows:

1. Family History.
2. Personal and Developmental History.
3. History of School Progress.
4. Social History.
5. Personal Characteristics and Social Conduct.
6. Economic Efficiency.
7. Practical Knowledge.
8. School Work.
9. Physical Examination.
10. Psychological Tests.

IV. The personnel of the traveling clinic unit consists of a psychiatrist, a psychologist and a social worker. In addition, the school provides (1) a school teacher, (2) a school nurse, and (3) a visiting teacher, who assist in certain phases of the examination.

V. The method of procedure of the traveling school clinics outlines itself as follows:

(1) *Listing of All Retarded Children by School Superintendent.*

(2) *List Sent to Clinic Psychiatrist.*

(3) *Date Set for Visit of Clinic.*

(4) *History and Test Forms Forwarded to School Superintendent.*

(5) *Histories Completed by Social Worker, School Nurse or Visiting Teacher.*

(6) *School Tests Completed by Assigned Teacher.*

(7) *Traveling Clinic Visits School.* A quiet section of the school is highly desirable for the conducting of the tests. The psychiatrist should be given the opportunity for a private interview, with the child, which should not be hurried under any circumstances.

(8) *Examination Completed by Clinic Staff.* An average of six examinations per day are completed. No attempt is made to hurry the examination, and if extra time is required it is taken.

(9) *Summary and Diagnosis by Psychiatrist.* When the entire examination has been completed, the results of the various tests are assembled by the psychiatrist and a diagnosis made. It is not always possible for the psychiatrist to reach a conclusion, and in about five per cent of cases the diagnosis is deferred until a subsequent visit of the clinic.

(10) *Parents Interviewed by Psychiatrist.* If possible the parents are interviewed, an effort made to acquaint them with the results of the examinations, and the importance of their coöperation in treatment is stressed. This is a vitally important part in the clinic procedure.

(11) *Detailed Report of School Superintendent.* At the conclusion of the examination a complete report is made to the school superintendent stating the facts in reference to data reported from the examination. This gives the superintendent an outline of the findings of the various portions of the examination, recommendations in the educational field, the social aspects of the case and the results of the physical examination. If the child has been recom-

mended for a special class, a copy of the Correlation Chart, recording his ability in his various school subjects, is placed in the hands of the special class teacher.

(12) *Recommendations of Psychiatrist.* These recommendations outline themselves in three separate classes.

(a) *Educational Advice.* In approximately fifty per cent of cases the educational advice is "Place in special class." Approximately four per cent are recommended for admission to a State school for mental defectives. In certain cases the solution is made by placing the child in a grade to suit his mental age; by dropping the child back one grade or possibly two grades, depending upon the characteristics of the individual case; by coaching in special subjects; by recommending manual training and work of a mechanical nature; or by having the child leave school and secure employment.

(b) *Social Advice.* The urgent need at the present time is for more complete social supervision of retarded children, especially in those cases in which the lack of parental interest and understanding play such an important part in the child's lack of adjustment. In a certain percentage of cases presenting definite behavior problems or personality deviations, it is recommended that the child be taken to the nearest mental hygiene clinic and kept under their supervision. Children showing pre-psychotic episodes are especially advised to visit these clinics.

(c) *Physical Advice.* Examinations of retarded school children show an unusual number of physical defects. Sixty-five per cent of these children are advised to consult a physician or a dentist immediately.

VI. A recent study of the intelligence quotient of 20,473 retarded school children and 3,741 cases in residence in Massachusetts State schools on September 30, 1929, has produced some interesting data. The average intelligence quotient of the 20,473 retarded children who were examined between 1921 and 1930, inclusive, was 71.7. The average intelligence quotient of the 3,941 children in residence in State schools on September 30, 1929, was 45.0. The difference between these two average intelligence quotients is 26.7 of the I.Q. scale. State school children show higher percentages in the I.Q. groups 0-.59, while public school retardates have higher percentages in the I.Q. groups .60-.99. The State schools contain greater proportions of lower grade cases, while children presenting lesser degrees of retardation are within the public school system.

Interesting sex differences were observed in the above two groups. State schools have large proportions of low grade and high grade males and small proportions in the I.Q. groups between .40 and .70. Females in State schools present fewer low grade and high grade cases, but a very large proportion in the I.Q. groups between .40 and .70. In the public school retardates forty-one per cent of males fall in the I.Q. groups .20-.69 as compared with fifty per cent for the females. In the I.Q. groups .70-1.00, males present fifty-eight per cent as compared with fifty per cent for the females. More males of high mental grade have difficulties in the public schools than do females of comparable mental ratings.

VII. During 1915, the first year of operation of the Massachusetts traveling clinics, 126 cases were examined. In 1921, when clinics were created to operate from each of the State schools and State hospitals, the number of examinations increased to a total of 2,284 for the year. Since that time the rapid increase in the number of examinations has far exceeded the natural growth which would be expected by normal increases in the school population. In 1930, a total of 6,527 examinations was conducted. Since 1928, the total number of clinic examinations seems to have more or less stabilized itself around a total of 6,000 examinations of retarded children per year. If we take this as a basis, it is evident that approximately 1.5 per cent of our grammar school population will be referred to clinics each year because of retardation. The public schools find themselves facing the problem of having to provide special classes for approximately 3,000 newly diagnosed retardates each year.

VIII. Since the inauguration of our school clinic system in 1914, a total of 51,205 examinations of retarded children have been conducted. Approximately 41,000 of this total are first examinations, and 10,000 are re-examinations. These figures show the magnitude of the problem of the retarded children within the public schools, and demonstrate the volume of work which has been accomplished by the traveling school clinics.

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VENOUS PRESSURE*

BY WILLIAM EVANS, M.D.†

I Method

THE estimation of venous pressure has not come into general clinical practice apparently because the simple methods of estimations are not sufficiently accurate or because the more exact methods are not sufficiently simple. It is believed, however, that a three-way stopcock, a needle, and a manometer used in the same manner as for the measurement of spinal fluid pressures offer a simple and fairly accurate method for determining venous pressure. It is a simple matter to combine this procedure with the withdrawal of blood for laboratory study.

Methods of estimating venous pressure have been based either upon observation of the point at which a vein collapses under variations of pressure or by directly measuring the pressure within the vein by means of a trocar and manometer. The former principle is the basis of the methods of Frey[1], Gaertner[2], v. Basch[3], v. Recklinghausen[4], Sewall, H.[5], Hooker[6], and Brown[7]. Any of these methods requires a considerable amount of skill and practice and their use is limited by the number of individuals whose veins are not suitable for direct observation. Furthermore the apparent range of values (400% variation for age and 100% for diurnal variation[8]) is so great as to render individual determinations of very little value. The latter principle is the basis for the methods of Moritz and v. Tabora[9], Villaret et al.[10], and Taylor et al.[11]. These methods have a greater range of usefulness in that any vein into which a needle can be introduced is suitable. Extraordinarily consistent readings are obtained from day to day in the same individual[9, 12] and readings by different observers do not vary significantly in their estimation of the average and the limits of normal. Villaret has compared the direct and indirect methods and found the former much more reliable for clinical use[13]. Moritz and v. Tabora[9] give 100 mm. as the upper limit of normal. Schott[14, 19] 130 mm., Moog and Ehrmann[15] 100 mm., Arnoldi[16] 103 mm., Fuchs[17] 125 mm., Villaret[10] 130 mm., Blumgart[20] 100 mm., Taylor[11] 100 mm., v. Gönczy[12] 120 mm., Ernst and Stagelschmidt[21] 120 mm. Bedford and Wright[18] found that 41 of 47 values for normal individuals were between 50 and 150 mm. All of these workers were using one of the direct methods. Villaret's method differs from the others in that an aneroid manometer is used in place of a fluid one. Bedford and Wright[18] point out that the aneroid manometer has a disadvantage in that it must be calibrated against a water manometer for accurate estimations of low pressure readings.

The conclusions herein reported were drawn from about 175 observations of the venous pressure, in a miscellaneous group of ward patients, made in the following manner. The patient lies horizontal in bed without a pillow. The arm with the most suitable cubital vein is slightly abducted and placed on the bed with the forearm extended.

This generally brings the ante-cubital veins on a level with the mid-axillary line. It is granted that various sources of error are introduced at this point from variations in body weight, sag of the mattress, chest diameter, etc., which are eliminated by the more accurate method of Moritz and v. Tabora, but a limited experience has indicated that they are not significant. A rubber tourniquet is placed about the upper arm (it having been made certain that there is no constriction from clothing or the like) and the ante-cubital space is prepared with alcohol. A short bevel needle, with three way stopcock and syringe attached in tandem is introduced into the vein and a small amount of blood withdrawn. At this point the glass manometer is inserted vertically into the stopcock and the cock turned. As the blood begins to rise in the manometer the tourniquet is released. As a rule the blood continues to rise for a few seconds until it reaches a level between 150 and 200 mm. when it begins to fall, usually taking a minute or two to reach a level about 50 mm. lower. A reading is considered satisfactory if a stationary level has been reached for 10 or 15 sec. and if there is an appreciable pulse or respiratory excursion. It is unusual to observe a pulse wave but occasionally in a very hyperactive heart it may amount to 10 mm. or more. A respiratory excursion is the rule, inspiration causing a fall and expiration a rise. Rarely the opposite is true. Fuchs[17] says the inspiratory rise is the rule in the leg. Brandt and Katz[22] have considered the paradoxical venous wave in the arm as due to anatomical variations whereby the expanded lung presses directly on the large veins in the immediate region of the clavicle. In the event of there being no appreciable excursions, a little light pressure may be applied to the upper arm or the column of blood lowered by drawing a little into the syringe. Then subsequently, if the same level is regained within a few millimeters, that may be considered a satisfactory reading. As in taking spinal fluid pressure readings it is very important that the procedure be made as painless as possible. If the patient is apprehensive, with tense muscles, abnormally high readings are obtained. Also un-

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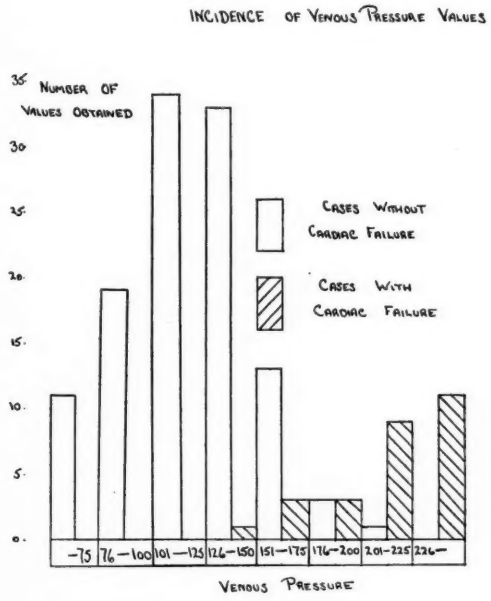
necessary trauma to the vein itself must be avoided. On two occasions of excessive trauma, I have seen what appeared to be a spasm of the vein with the blood mounting in an irregular jerky fashion to over 300 mm. As a rule, however, the procedure can be performed quickly and simply and with almost no pain to an individual with normal sensibilities. Sources of error in addition to those mentioned above are to be found in capillary action within the manometer, variations of specific gravity of blood, and finally the comparison between a column of blood with a similar column of water. However, these sources of error are believed to be negligible and there is no significant difference in the results obtained.

The determinations of venous and spinal fluid pressures have much in common. Solomon[23] has shown how important complete mental and physical relaxation is for a reliable estimation of the latter and that the first readings are always higher than those obtained a few minutes later. All of these points are equally true of venous pressure determinations. He also points out that the position of the patient is a factor. Correspondingly Brandt and Katz[22] have shown that the degree of abduction of the arm affects the venous pressure to some extent. Arnoldi[16] found that there was a difference in the venous pressure reading depending upon whether the blood flow in the arm had been previously obstructed by a tourniquet. That there is a close correspondence between venous pressure and spinal fluid pressure is evidenced by the common effect of coughing, straining, breathing, etc. That parallel variations are the rule has been noted by Tzanck, et al.[24]. This is denied by Claude, et al.[25] who find that though such is frequently the case there is no constant relation and that various nervous and mechanical factors may influence the one and not the other. Urechia and Mihalescu[26] concur in this view. In the case of the lowest venous pressure which I encountered (a case of hysterical anesthesia) when the reading was 40 mm. an identical value was obtained on the same day for the spinal fluid pressure. On the few occasions when I have done lumbar puncture on a decompensated patient, high pressures corresponding with the high venous pressure were obtained.

II

Variations of Venous Pressure in Conditions Other Than Cardiac Decompensation

Realizing the futility of deciding what is "normal" among a miscellaneous group of ward patients, I have chosen simply to compare the values obtained in a group of patients with clinical signs of circulating insufficiency with a group of those showing no such signs. Values in doubtful cases have been excluded. The point in view has been to determine whether the venous pressure determinations would have been of help in these doubtful cases. A diagrammatic comparison of the incidence of values in the two groups shows that the two groups are fairly distinct with very little overlapping. In the miscellaneous group



are included cases of hypertension, obesity, menopausal syndrome, aneurysm, pneumothorax, etc., in which it is well recognized that values higher than normal are sometimes obtained; yet in spite of this the values rarely approach those commonly seen in cardiac decompensation. Most of the values obtained in the higher ranges were not unexpected and were attributable to one or another of the above conditions.

Hypertension has for some time been recognized as a condition in which the venous pressure is in the upper limits of normal or slightly above[16, 17, 20, 27]. In the compensated group, comparing those with and those without hypertension, I found an average of 115 mm. for the latter and 132 mm. for the hypertensive group. Villaret[28] found that arterial and venous pressures were roughly parallel except in advanced arteriosclerosis with obstruction to the peripheral flow when the venous pressures were low. This parallelism has not been confirmed by other observers and I cannot subscribe to it. The higher venous pressures seen in hypertension only become evident in comparing the averages of groups of cases[14, 17]. In a very excellent study by Brandt and Katz[22] it was found that the common values for the hypertensive patient are between 130 and 150 mm. Observing the effect on the venous pressure of adrenalin, eupaverin, heat, and cold and comparing the normal reaction to that in the hypertensive, they concluded that the elevated venous pres-

sure in hypertension is due to a hypertonicity of the veins in that condition.

Emphysema, and dyspnea resulting from it, have no significant influence on the venous pressure[29, 13]. An average of 126 mm. for 13 values obtained in asthmatic and emphysematous patients compares with 115 for the control group. Thus the determination of the venous pressure may be of decided value in distinguishing the dyspnea of asthma and emphysema from that of circulatory insufficiency, a point that is often difficult to determine with the usual physical signs. In table I a series of

TABLE I

ASTHMA CHRONIC BRONCHITIS EMPHYSEMA ARTERIOSCLEROSIS DIABETES MELLITUS

Date	Arterial Pressure	Venous Pressure	Condition
12/2	125/65	150	no dyspnea
		110	considerable dyspnea
12/4		120	considerable dyspnea
		300	violent cough
12/5	110/64	350	violent cough and dyspnea
12/8		110	no dyspnea
12/11	130/70	145	no dyspnea
12/15		110	no dyspnea

values is recorded as obtained from a diabetic patient with asthma on mornings when blood was withdrawn for blood sugar determinations. Dyspnea, in itself, resulting from an asthmatic attack, does not significantly affect the venous pressure except when accompanied by cough or straining.

In the experimental animal, pneumothorax is accompanied by a rise in the venous pressure[30, 31]. This was confirmed in man by Kroetz[29] who, in one case, showed that the rise in venous pressure is arithmetically parallel to the fall in negative intrathoracic pressure. The pressure values were apparently obtained simultaneously. Villaret[32] and Grellety-Bosviel[33] with their extensive experience find that moderate degrees of pneumothorax do not influence the venous pressure and that a rise occurs only if the pneumothorax is so extensive as to cause circulatory embarrassment. Indeed, venous pressure readings have been recommended as a guide to pneumothorax control. Cordier (quoted by Villaret[33]) was of the opinion that only a pleural effusion on the right could raise the venous pressure but Villaret denies this. Apparently small amounts of fluid or air in the pleural space do not affect the venous pressure[17, 29]. A series of values obtained from a patient under pneumothorax treatment are recorded in table II. A significant rise was obtained only when the determination was made immediately after an amount of air was admitted to the pleural space sufficient to cause considerable dyspnea and discomfort. It is interesting to observe that the rise occurs in both arms. Grellety-Bosviel[33] found no change in the venous pressure in 85 of 100 pneumothoraces while in the remaining 15 the rise was for the most part only transient. He found normal values in four individuals with bilateral pneumothorax.

Obviously, mediastinal tumors of various sorts may cause a rise in the venous pressure by direct pressure on the large veins[13, 34, 35]. The rise may at first be found in one arm only and then involve the other as the mass extends[35]. Villaret[13] found the venous pressure elevated in mediastinitis. Aneurysm of the aorta is a common form of mediastinal tumor giving rise to increased venous pressure. Eyster and Middleton found the pressure twice as high on the left as on the right in one case. In the one case which I encountered, when the aneurysm was described by the roentgenologist as occupying the greater portion of the left upper chest, the venous pressure in the right arm was 115 mm. and 150 mm. and 175 mm. on two occasions in the left. In three of four cases of arteriovenous aneurysm Villaret[13] found an elevated venous pressure in both arms and legs. In the other, when the aneurysm was in one leg the venous pressure was high in both legs but lower in the arms.

As indicated above, nervous or emotional tension will give an elevated venous pressure reading. This no doubt accounts for the moderately elevated values seen in neurasthenics and those with vasomotor instability[12, 14]. Under the designation of *phlebo-hypertonia climacterica*, v. Gönczy and Kiss[36] have described the elevated venous pressure frequently seen in women at the menopause and suffering from vasomotor disturbances. In their group 89% showed values above their accepted normal of 110 mm. The extreme values were 80 and 280 mm. with the majority of the values between 120 and 150 mm. They were able to find no correlation in this group between high arterial and high venous pressures. Certain definite nervous stimuli are known to increase the venous pressure. It has long been noted that vagus stimulation in the experimental animal will cause a rise[30, 37]. Villaret[13, 38] has observed this in man in producing the oculo-cardiac reflex. He found that the rise in pressure was proportional to the slowing of the pulse, the normal elevation being 30-70 mm.

The values in obesity are usually somewhat elevated[29, 27] apparently due to pressure of the soft parts about the vein. Conversely, in thin emaciated individuals whose skin is loose, values in the lower ranges are obtained. This would seem to explain the low values sometimes seen in advanced pulmonary tuberculosis. Excess fluid like excess subcutaneous tissue will raise

the venous pressure. The most striking example of this which I encountered was a man with extensive edema everywhere below the neck. The skin was everywhere tense and glistening. Here the venous pressure was 225 mm. Neither clinically nor at autopsy was there evidence of heart disease. Obviously if the edema is confined to the lower extremities that in itself will not raise the venous pressure in the arm. Thus a reading of the latter may give us some insight as to the nature of the edema existing in the lower extremities whether cardiac, renal, inflammatory, or due to varicosities. v. Farkas[39] has indicated that the venous pressure as well as the osmotic pressure is of value in distinguishing cardiac from renal edema. Schott found that, whereas the venous pressure is ordinarily the same in both the arm and the leg, with ascites considerably higher values are obtained in the leg and to a lesser extent in the arm. Paracentesis brings the values to normal levels.

It is generally believed that variations in the CO_2 tension of the blood affect the venous pressure[12]. This belief is based on the observations of Henderson[40] in forced breathing in patients in a Trendelenburg position. Using an inaccurate method he observed a fall in pressure. Conversely Gollwitzer-Meier[41] observed in dogs breathing a high percentage of CO_2 that there was (usually but not always) a rise in the venous pressure. It is to be understood, however, that as in the case of pneumothorax, these are acute experiments and are not necessarily applicable to conditions of longer duration as seen in the clinic. In a case of very marked diabetic acidosis, I found a perfectly normal value for the venous pressure. On the other hand, in emphysema, where the CO_2 combining power is said to be high, normal values are also obtained. Kroetz[29] was able to find no correlation between the venous pressure and changes in CO_2 tension in the blood.

TABLE II

PNEUMOTHORAX (RIGHT)

Date	Arterial Pressure S.	D.	Venous Pressure Rt.	Lt.
12/7	110 mm. Hg	70 mm. Hg	75 mm.	
12/11			110 mm.	105 mm.
12/12	Pneumothorax 1000 cc.		Intrathoracic Pressure Increased from —50 mm. to —15 mm.	
12/12			105	85
12/13	120	70		
12/15	Pneumothorax 1500 cc.		Intrathoracic Pressure Increased from —60 mm. to —10 mm.	
12/18	Pneumothorax 1000 cc.		Intrathoracic Pressure Increased from ? to +5	
12/18			175	160
12/20	114	70		
12/23	Pneumothorax 450 cc.		Intrathoracic Pressure Increased from —20 to +2.5	
12/27	120	80		
1/ 3	100	50		
1/10	110	65		
1/14	Pneumothorax 650 cc.		Intrathoracic Pressure Increased from ? to +5	
1/15	102	74	90	95

III

VENOUS PRESSURE IN CARDIAC INSUFFICIENCY

Cardiac insufficiency is made manifest by a variety of signs and symptoms—dyspnea, orthopnea, subcutaneous edema, pulmonary edema, free fluid in the serous spaces, visceral congestion, etc. It is well known that these signs do not occur in any progressive manner proportional to the severity of cardiac insufficiency. There may be hepatic enlargement without pulmonary râles, dyspnea without edema, etc. In other words, circulatory failure may be manifest in only one organ. It is not always simple to determine whether some single manifestation is the result of circulatory failure or of some wholly unrelated process. To decide this point (to be sure in many cases an academic one) special means of investigation are available. These include measurements of venous pressure, vital capacity, circulation time, cardiac output, *Strömungsdruck*, oxygen and carbon dioxide blood values.

It is by no means generally agreed that the venous pressure has any very close relationship with cardiac failure. There are those who feel that a rise in the venous pressure is a late manifestation of cardiac failure and that the rise is not at all proportional to the degree of failure. Kroetz[29] and Blumgart[42] tend to this view and were pessimistic about the value of determinations. Fuchs[17] considered venous pressure determinations of very little help in prognosis. On the other hand, Villaret[43], Clark[46], and Eyster and Middleton[44, 45] are more enthusiastic and find a more constant and proportional elevation of the venous pressure in cardiac failure. Eyster[47] has recently reaffirmed this view. Giraud-

Costa found in two cases that a sharp rise in the venous pressure preceded by some minutes the onset of acute pulmonary edema. His values were obtained in a routine fashion when there was no other indication of the impending state. It is more generally agreed that repeated determinations of the venous pressure are of value in following the treatment of circulatory failure. For example Blumgart, who is pessimistic about the value of individual determinations, points out that a series of determinations is valuable in following the treatment of a given case[49]. The virtues of thoracentesis and venesection are nicely brought out by the fall in venous pressure as shown by Taylor[11], Fuchs[17], Eyster and Middleton[44, 45, 46]. The value of repeated observations is obvious in that factors causing indeterminate variations in a number of individuals are automatically eliminated by observations in the same individual when there is only one variable.

Determinations of the vital capacity of the lung have been carefully investigated as a means of estimating cardiac decompensation. Here again, because of so many variables, individual determinations are of much less value than are repeated ones in the same individual. Unfortunately the vital capacity is of no value in estimating cardiac insufficiency in just those conditions when the state of affairs is so often obscured and some special means of investigation needed, i.e.—asthma, emphysema, pneumonia, obscure serous effusions, etc.—conditions which in themselves do not affect the venous pressure. There is also a large subjective element as well as the matter of training and physical condition which is much more a factor in vital capacity than in venous pressure determinations[50]. Wiggers[51] states that vital capacity determinations are of no value in estimating cardiac failure in obesity, neurasthenia, old age, hyperthyroidism, emphysema, edema, pleurisy, pleural effusions, pregnancy, ascites, and enlarged liver or spleen. If this is true, then the value of vital capacity determinations must be very limited indeed. A combination of venous pressure and vital capacity determinations might in some cases be of special value, the former giving an index of congestion in the peripheral vessels and the latter of congestion in the pulmonary vessels. Blumgart[42] was of the opinion that in complicated cases the vital capacity was a more reliable index of circulatory failure. Allen and Hochrein compared the venous pressure and vital capacity in heart disease and found that the values were inversely parallel except in pulmonary disease where the vital capacity gave no indication as to the state of the circulation. Kastlin and Maclachlan[53] point out that the venous pressure is the most reliable guide to the state of the circulation in pneumonia when the usual signs of failure are obscured.

Determinations of circulation time and cardiac output may be dismissed from the present discussion with the statement that, whatever their ultimate practical or scientific value may prove to be, at the present time they require highly technical procedures and are not yet suitable for bedside practice. The determination of the oxygen and carbon dioxide content of the blood also requires a special training and technique and, at the present time at least, variations of these values in heart disease are solely of scientific interest. Weisz has defined a value known as the *Strömungsdruck* which is that pressure in the arteries at which the circulation of blood will first appear in the nail bed observed under a microscope. It is always somewhat lower than the systolic pressure. The difference between the systolic pressure and the *Strömungsdruck* is much less in the healthy individual than in one with cardiac failure. Moog and Ehrmann[15] as well as Rotky and Klein[27] have compared this difference with the venous pressure and found no correlation in the two sets of values. The latter two workers consider the venous pressure much more indicative and reliable in circulatory failure.

REPORT OF CASES

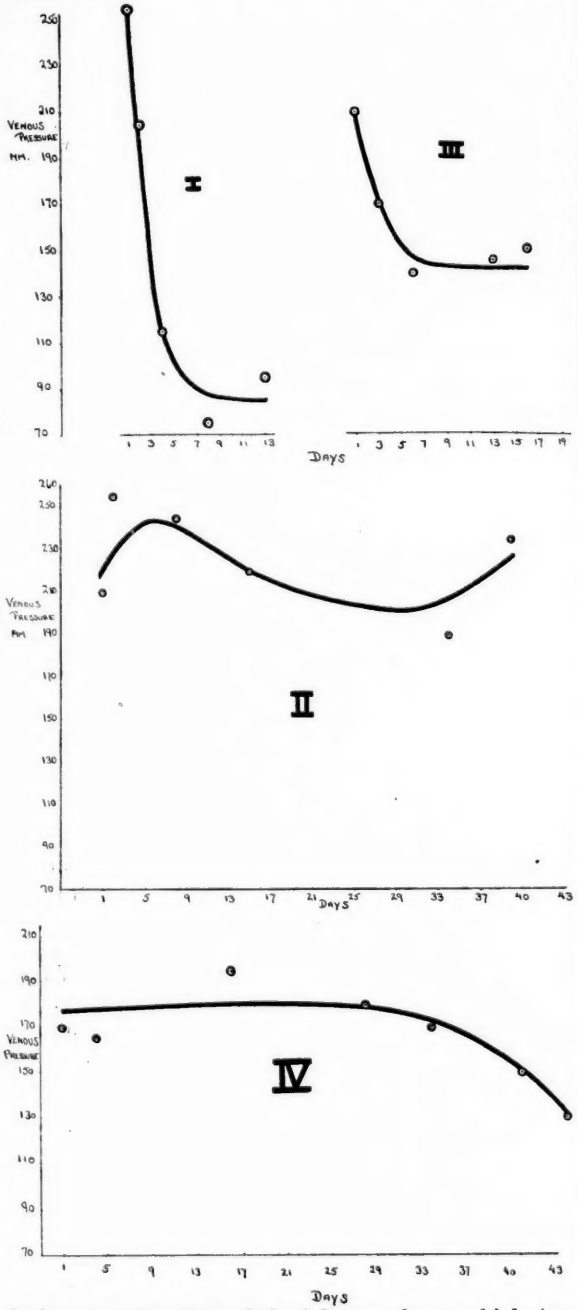
CASE I is that of a thirty-four year old woman who entered the hospital for the fifth time with cardiac failure. She had chronic valvular heart disease (mitral stenosis) and auricular fibrillation. Except for very little evidence of congestion in the lungs, she had well marked signs of circulatory failure with a rapid pulse, enlarged liver, peripheral edema, dyspnea and orthopnea. Altogether she was in great distress. She had taken no digitalis for six weeks and obtained striking and rapid relief from rest in bed, digitalis, and morphia. Her prompt response to treatment is well indicated by the rapid fall in venous pressure.

CASE II is that of a thirty-six year old truck driver with hypertensive heart disease. He also was admitted with advanced circulatory failure. He was pale, cyanotic, dyspneic, orthopneic, with enlarged heart and liver, and with rapid pulse and respirations. There was, however, very little moisture at the lung bases and only the slightest amount of peripheral edema. His response to treatment was very poor; he declined and died eight weeks after admission. His course was an irregular one but on the whole downward in spite of rest, morphia, digitalis, diuretics, thoracentesis, drainage of the edematous extremities with Southey Tube, phlebotomy, etc. His course is indicated by the pressure curve which, it will be noted, was for the most part well above 200 mm.

CASE III is that of an obese woman, aged 50, who entered complaining of dyspnea and cough for some five or six weeks. She was known to have had diabetes mellitus seven years previously, at which time the heart was not remarkable on physical examination. Her present illness had been one of increasing dyspnea on exertion more recently with paroxysms of cough and dyspnea at night. It was not entirely clear from the examination whether she was suffering from myocardial insufficiency, a respiratory infection, or both. Her increasing dyspnea might have come from increasing obesity or from cardiac failure. Her rapid pulse and fever of a degree or two could be explained either by cardiac

failure or by an infection, as would likewise the râles which were heard at the lung bases. She had well marked varicose veins, thus accounting for the edema over the tibiae. The fact that her tolerance for sugar was lower than usual pointed to the presence of an infection. In addition to other measures, she was treated with digitalis. The high venous pressure on admission with a progressive fall under treatment indicated that she had circulatory failure although other signs were not conclusive.

CASE IV is that of a forty-nine year old woman with advanced myxedema of at least eight years' standing and untreated for the past four years. She



had a greatly distended abdomen from which two liters of fluid were removed. It was a matter of some academic interest whether this fluid was attributable to the myxedematous state (a few cases of which have been reported) or to cardiac failure. The râles at the lung bases were not incompatible with abdominal distention alone. The venous pressure on admission was not conclusive but the fact that a constant level was maintained for a month or more in spite of digitalis and rest would speak against any ordinary form of cardiac failure. Circulatory failure in the true myxedema heart is very rare if it exists at all. The terminal fall in the venous pressure curve was attributed to the loss of a myxedematous character to the skin. The skin became very noticeably softer and less tense under thyroid medication, the most striking changes not occurring until treatment had been in progress for some time.

SUMMARY

A simple and practical direct method of estimating venous pressure is described—a method which can be combined with the withdrawal of blood for other purposes.

Variations occurring in conditions other than circulatory failure are considered and the view expressed that these variations are not significant unless the factors giving rise to them are fairly obvious and therefore easily accounted for.

It is demonstrated that venous pressure determinations are of value in recording graphically the effect of treatment in cardiac failure and that the presence of cardiac failure may be indicated in conditions where other signs are of no value.

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THE ETIOLOGY OF ECZEMA*

BY WILLIAM J. MACDONALD, M.D.†

GRADUALLY and slowly, and by dint of painstaking investigation, the etiology of eczema is becoming clarified. In contradistinction to the older, more or less prevalent, idea that eczema is almost wholly caused by endogenous metabolic disturbances, there now exists a school which would regard the disease as exogenous and allergic in the great majority of cases. That it can be and, undoubtedly, is due, in certain cases, to some metabolic fault is unquestioned. However, before conceding this point, the dermatologist searches with sleuth-like tenacity for an external causation.

Research work by trained laboratory workers and by keen investigators has demonstrated certain facts. Quantitative and qualitative examination of the urine and blood of patients afflicted with eczema has been of doubtful value in the elucidation of a constant metabolic etiology. These investigations have been directed at a determination of the blood sugar, uric acid and constituent salts. Schamberg and Brown[1] have published their observations and drawn certain conclusions. But this very necessary and painstaking research work has not entirely clarified the whole situation, though it has at least succeeded in directing our energies into other channels.

Exogenous Causes. At the present time the dermatologist is acutely interested in tracing the cause of eczema to some external factor. This sometimes involves a visit to the home. From infancy to old age, especially in modern times, we are face to face with irritation. It lurks in the powder applied to the infantile skin; on the toys vividly colored and invariably in the child's mouth; in hair lotions, hair tonics, face creams, skin cleansers, eyebrow pencils, superfluous hair removers, toilet waters, perfumes, mouth washes, spectacle frames, furs, tooth-pastes, patent medicines, plants, soaps, hand cleaners, silken goods, rayon, unwashed clothing, shoe dyes, wall paper and so on. Dr. Everett S. Lain of Oklahoma City had a very instructive demonstration at the meeting of the American Medical Association at Philadelphia in 1931. He clearly illustrated the harmful effect of apparently innocent creams. The list of irritants is very extensive. Allow me to quote two examples:

CASE I. J. H., male, referred by Dr. F. S. Thorne, presented a violently itchy, vesicular, exudative eruption on both feet. It appeared twenty-four hours after wearing a pair of new and unwashed colored stockings.

CASE II. F. G., male, suffered for three months with a subacute, itchy, erythematous eruption on the

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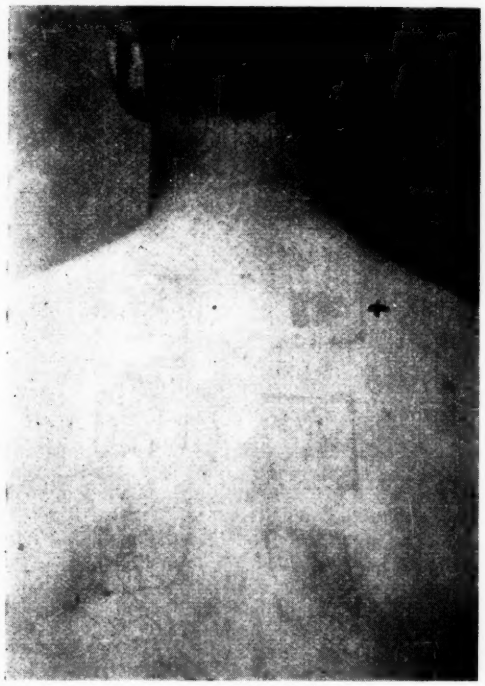
face. Self-medication had been valueless. Patch tests performed with all his toilet requisites proved that a certain shaving cream was the cause. The eruption disappeared when he changed the cream, which had been purchased cheaply and in bulk at a sale.



The upper right reaction demonstrates sensitivity to a certain shaving cream.

Therefore, when presented with an acute eruption, it is essential to eliminate, if possible, exogenous causes by the performance of patch tests.

The Patch Test. The patch test technique has been described in various medical journals, but is comparatively unknown and rarely practised. The supposedly offending substance, be it plant, drug or toilet accessory, is applied to a small square of damp linen. This is laid on the skin, covered with a larger square of rubber tissue, which itself in turn is finally overlaid with a still larger square of adhesive tape. The rubber tissue is necessary because adhesive tape, being a primary irritant, might confuse the reading, which is done twenty-four to forty-eight hours later. These patches are most conveniently applied to the back. All suspected articles should be tested.

It is to be remembered that valuable as this test is, it has certain limitations. It is only of real value in acute eczema. Moreover, should the substance which is considered to be the causative agent be a primary irritant, one would naturally expect a reaction not only on the hypersensitive skin, but on the normal integument. For that reason it is necessary to dilute the suspected substance, if it is a primary irritant, until it is non-injurious to the normal skin. In addition, the patch test should only be used with substances with which the patient has been in immediate contact. The type of reaction that is found on removing the patch should simulate that of the disease under study.

Raison d'être of Patch Test. The patch test depends, as do the scratch and intradermal tests, for its general efficacy and usefulness upon the truth of the theory that a great many of the various types of hypersensitiveness are due to the existence of cell fixed antibodies, and that a precipitant alone is needed to evoke a cutaneous response. Moreover, it is enunciated that there are different localizations of hypersensitive reactions in the skin, leading, obviously, to different types of cutaneous fulminations. Urticaria, for example, is a dermatological response to an irritant; so, too, is acute eczema. The clinical picture of each, however, is quite different. The cellular elements of the skin, therefore, vary in that each is responsible for the anchorage of a specific type of antibody.

The Scratch Test. I believe certain types of eczema are caused by incorrect food. Generally, this type of eczema has existed for years, with seasonal exacerbations. It is generalized at times, is nearly always more infiltrated upon the flexural surfaces, and is extremely itchy and non-exudative. The skin tends to be dry, the hair thin and brittle, and the cutaneous response to cold is marked. It would almost suggest an endocrine deficiency. Nevertheless, I do not find such therapy of any value. Blood and urine examinations usually show increase of uric acid, urea nitrogen and non-protein nitrogen. But correction of the purin and non-albuminous intake is not curative, although valuable. In this type of eczema, the etiology is to be found, if possible, in exactly performed scratch tests, using food proteins, animal emanations, furs, pollens, feathers, but chief amongst these, *foods*.

Technique. The scratch test is the application to small cutaneous abrasions of the proteins of various foods, pollens, etc. Every scratch should be equal in size. Blood should not appear. It is unnecessary to make large scratches. Small ones are painless. Children even submit to them with readiness. The knife should be sharp, and a special type can be obtained at instrument makers. Normal skin is chosen for the tests. The response may occur in half an hour, but a six and twenty-four hour reading is desirable. A positive reaction need not necessarily be dramatic as regards size. Close observation and comparative readings are necessary for the correct interpretation of what constitutes a reaction. I rarely find very marked reactions, to foods, especially. In other words, a reaction is positive not because it attains a certain size, but because, comparatively speaking, it is objectively more sizable than a control or other non-reacting substance. It is customary in performing these tests to scratch through a drop of N/10 sodium hydroxide,

which contains the protein for that test. It is astounding how frequently such food substances as potato, cocoa, milk, eggs, and the cereals, especially wheat, will be found giving quite definite reactions, provided the technique has been carefully carried out.

It is common to find this type of eczema associated with asthma. At certain times, the violence of the asthma abates and the demon of eczema runs riot. Then, when the asthmatic storm is raging, the skin is riding at anchor, peaceful and calm. It is possible that a periodicity of spontaneous desensitization and sensitization of the cutaneous and bronchiolitic cellular systems is the factor at work in such phenomena. In the elucidation of these tests, it is not uncommon to find not only a number of foods reactive, but also decidedly positive tests to hair, feathers and other substances. It is a nice problem, and a very difficult one, to unravel the tangled skein of these eczematous patterns.

Etiology of Infantile Eczema. We are here dealing with a particularly difficult type of eczema. O'Keefe and Rackemann[2], Duke[3], and others have been wrestling with this problem, and emphatically declare that diet figures as a causative factor in infantile eczema. O'Keefe and Rackemann suggest that the food proteins pass into the blood stream and into the maternal milk, thus sensitizing the child. Egg, milk, potato, wheat and oats appear, according to the studies of O'Keefe and Rackemann, to be the most frequent foods causing infantile eczema. Their elimination from the diet has given most encouraging results. The problem of replacing milk in a baby's diet has been aided, or rather solved to a certain degree, by the work of Hill and Stuart[4] with the soy-bean. The soy-bean formula has been marketed by Mead, Johnson and Company under the name "Sobee." This food contains adequate nourishment for infants. The formula follows:

Soy-bean flour (ground press cake)	67.50%
Barley flour	9.50
Olive oil	18.95
Sodium chloride	1.35
Calcium carbonate	2.70
	100.00%

A vast amount could be said about infantile eczema, but as the etiology would most certainly appear to be dietetic, our best effort should, therefore, be directed to the discovery of the offending article and its abolition from the menu.

The Allergic Explanation of Eczema. Every day, different types of eczema are presenting themselves. The chronic, infiltrated, extremely pruritic, possibly very confluent, and plaque-like lichenified type taxes our skill to the utmost. This type is common on the nape of the neck and upon the lower halves of the legs. When scratch tests are negative, and when a thorough examination reveals nothing, one is faced with an etiological conundrum. It is quite feasible to assume that there exists a state of allergy in such patients and that the dermatological phenomena represent a reaction to an undiscovered focus of disease. Medical research has not yet unlocked a one-hundredth part of the pathological doors to clear understanding. Our laboratory tests cannot always be specifically accurate about obscure gastro-hepatico-intestinal maladies, especially in the early stages. Generalization is not wise, but it is not entirely illogical to assume that some of these obscure dermatoses represent an allergic response to disease tissue processes. Coca[5] states: "In not a few instances the exciting cause is not a specific one but an infection, the removal of which sometimes is followed by a cessation of the allergic symptoms." The following short case history exemplifies this:

CASE III. M. H., aged 38, female, complained of a violently itchy, exudative, erythematous, more or less generalized, somewhat confluent, acute eruption which staged its "première" in April, 1929. I saw her for the first time in February, 1930. The history revealed "a gall bladder attack" in 1922. At the present time, she complained of a vague and uncomfortable feeling of weakness in the right lumbar region. Routine treatment with cholagogue and gastro-intestinal sedatives relieved but did not cure her. X-ray examination revealed nothing pathologic. She gradually became worse, and experienced loss of her hair. Suddenly in March, 1931, she became acutely ill. X-ray now showed an appendiceal abscess. She recovered after the removal of a gangrenous appendix, complicated by peritonitis. Her skin rapidly returned to normal. Her hair has completely reappeared. I believe her pain in 1922 was appendiceal. At no time during the years that followed can it be definitely said she ever had a normal appendix.

I have seen that particular type of chronic eczema called neurodermite so fairly consistently associated with distinct signs of cholecystitis or chronic hepatitis, that I believe it is an undoubted cutaneous allergic response to hidden infection—impossible to diagnose by laboratory tests. The patients rarely have acute symptoms, and nearly always refuse operative intervention. Rowe[6] has emphasized the allergic nature of such common ailments as gastritis, colitis, herpes labialis and other common gastro-intestinal annoyances. He stresses the elucidation of such problems by food tests and enunciates dietetic measures which are extremely valuable. His "elimination diets" have proved of value in my experience. Politzer wisely remarked, "The doctrine of allergy has thrown a brilliant light on the field of dermatology." Rowe and others state that negative skin tests must not discourage the physician, for allergy to certain substances can exist without cutaneous response. For that reason these elimination diets are valuable. Observation of the effect upon the patient of ingestion of a suspected food may

shed a radiant light upon the etiology at times.

Explanation of "Allergic Skin Disease." The allergic skin diseases are contact dermatitis and atopy, according to Coca[5]. By *contact dermatitis* is meant dermatitis due to surface contact with an excitant, e.g., poison ivy plant. By atopy is meant a number of clinical conditions, including asthma, hay-fever and eczema. No antibodies are found in contact dermatitis.

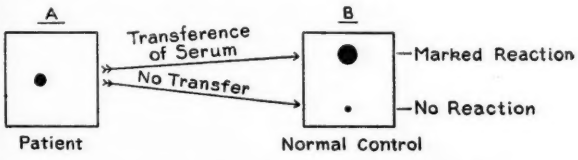
An allergic skin disease is the natural cutaneous response to an initial instigating lesion whereby the blood stream is flooded with formed elements. As a result of this type of saturation, the skin becomes specifically sensitized. This sensitization must be of a high degree before the integument will break into a pathological rebellion. Trichophytosis is readily diagnosed at the primary focus, not only clinically but also microscopically and culturally. In the secondary foci—trichophytids—the fungus cannot be isolated. Why? Because here we are face to face with an allergic skin violently insulted by an exogenous causation—the antigen—and responding with the production of specific antibodies. The clash of antigen and antibody is marked by more or less inflammation. To illustrate:

CASE IV. W. V., 30 years of age, complained of "itch" of eight months' duration upon the soles of the feet and between the toes. Trichophytosis was diagnosed microscopically. A severe secondary pyogenic infection on the feet precipitated a flood of hematogenously borne antibodies, causing a generalized eruption—trichophytids.

The Prausnitz-Kustner Reaction. The demonstration of antibodies in allergic skin diseases is available by this method. It is not at all applicable to every type of eczema. Should the patient (A) be suffering from an allergic type of eruption which might feasibly be milk or eggs, inject 0.05 cc. of his serum intracutaneously into a normal person (B). Twenty-four hours later inject intradermally or by the scratch method, 0.02 cc. of the suspected excitant into the same area. At the same time a control of the suspected substance is made in the normal skin of (B). A wheal or erythema at the prepared site, greater in size than the control, proves fairly conclusively the transference of specific antibodies from the patient to the normal individual. Of course, it proves the presence of sensitizing antibodies in the patient's blood. This method provides us with a means of concisely proving a hypothetical cause in certain particular cases.

So far, the Prausnitz-Kustner method is not applicable to all types of eczema, having its greatest value where the eruption is due to food or drugs. European and some American observers have brilliantly advanced this subject of allergy. Bloch[7] suggests that the failure of the Prausnitz-Kustner method in certain types of eczema, i.e., the inability to transfer antibodies to the passively sensitized skin, is due to the inability of the antibodies to become free. They are cell fixed. However, the test does certainly aid us in determining the causative factor in a not uncommon group of endogenous dermatoses —the toxicodermas.

The question is often asked by patients, "Why is it, since I have been in contact with this irritant for years, that I should for the first



time be affected now?" I can only suggest—as others have suggested—that some individuals develop a sudden hypersensitiveness to a particular irritant, after a variable period of exposure, by virtue of the sudden unleashing of a precipitating cause. This might feasibly be climatic, debility, the concomitant appearance of some other illness, a change in the standardization of industrial manufacture, or some injury. The writer, for years apparently immune even on actual exposure, to Rhus toxicodendron, two years ago acquired marked sensitivity to the plant. The precipitating factor here was extensive heat and physical overexertion. Men working in large industrial plants can handle with impunity all manner of irritants for years. Then quite unexpectedly they may develop violent contact dermatoses. I believe the precipitating factor in such cases—in some, at least—to be a qualitative alteration of the substances handled by the workmen, together with overexposure to heat and cold.

Bacterial Sensitization. Can the etiology of eczema encroach on this debatable ground? The question needs scrutinizing, but the following example is suggestive of possible affirmation:

CASE V. R. F., male, a greaser, while working on a steamship sustained an injury to his leg. He dressed it with some soiled material and remained at work. Upon the following day, the skin around the wound was pruritic, red, painful and swollen. Gradually a generalized, pruritic, papular eczema covered the whole body. He made a slow recovery. One year later, exactly the same phenomena recurred, namely, localized infection following injury, and a generalized eczema. He recovered again.

What could have caused the generalized eruption? Bacterial hypersensitivity, quite possibly. Cases IV and V are very similar, namely, a generalized eruption following a definite primary irritant,—in the one case, parasitic, in the other, bacterial. In other words, it is not at all illogical to believe bacterial allergy can initiate eczema. Charles Mallory Williams, in the after-discussion of a paper delivered by A. F. Coca, at the New York Academy of Medicine, in December, 1928, mentioned the case of a man suffering from eczema which had proved baffling

to lengthy treatment and which disappeared on removal of a pyonephrotic kidney. He also quoted a case of eczema associated with chronic appendicitis. Appendectomy was the curative factor in this case. As stated before, Coca believes infection may be regarded as a cause of allergic disease. Such types of generalized eruption might conceivably be of neurogenic origin. Here, however, one is floundering in a sea of vagueness. Sulzberger and Mayer[8] state: "As resistance to infections and variations of susceptibility to bacterial invaders may be considered as dependent on the same general laws as those governing sensitizations and immunities to nonliving substances, it would not be surprising to find variations in infectious diseases dependent on diet."

Epidermophytosis: its Etiology. With a microscope, glass slides and 15% sodium hydroxide, one can attack the etiological problem of this disease with more or less confidence. Upon certain areas, the shining, filamentous mycelia diagnostic of epidermophytosis can readily be found. It is a form of vegetable life, very widespread, and causes dermatological phenomena both subjectively and objectively, very like those of typical eczema. For that reason, therefore, when evolving the eczematous problem, it is very essential to exclude the epidermophyton.

The treatment of eczema is quite different from that of epidermophytosis—another reason for correct interpretation. At times the mycelia, indicative of epidermophytosis, cannot be found, and yet the skilled observer knows perfectly well that the disease is, undoubtedly, tineal. In such cases implants of the scales upon Sabouraud's medium may successfully reproduce the particular genus causing the disease. In searching for the fungus, the vesicles and peripheral scales lend themselves to study. The macerated epidermis between the toes, the dry scales at the margins of tinea cruris or tinea manuum, and submammary lesions all are ports of call for the parasite.

Glycosuria and Eczema. It would serve no particularly useful purpose to dilate fully upon this question here. Glycosuria has been written about very thoroughly. In considering the etiology of eczema, however, one can hardly omit a passing mention of glycosuria. Every eruption of a pruritic nature demands urinalysis. Certain excoriated, papular eruptions, undoubtedly eczema, of months' and years' duration, can be helped by correct diet, should the cause be glycosuria. At the same time, Schamberg and Brown[1] were impressed with the comparatively small part which hyperglycemia plays in cutaneous diseases. They call attention to the need for differentiation of true diabetes and moderate increase in blood dextrose.

Eczema with Reference to the Nitrogenous Content of the Blood. Schamberg and Brown[1], from an examination of the blood chemistry of eight hundred and seventy-five cases, conclude that their work was worth while, in that it paved the way to appropriate dietaries. They strikingly illustrate the high percentage of uric acid, non-protein nitrogen and urea nitrogen in eczema. It is a moot point whether such high findings actually indicate the cause rather than the effect. At all events, resistant and chronic types of eczema call for blood chemistry studies as a distinct etiological aid.

Tice[9] states that the most distinctive cutaneous affection of gout is eczema, usually of the external ear and of the parts in that immediate neighborhood. It is not severe, but very persistent.

CONCLUSIONS

(1) Exogenous eczema can be diagnosed by patch tests, but the investigator will, undoubtedly, experience many failures.

(2) The patch test is of particular value in industrial eczema.

(3) The scratch test is valuable for the elucidation of dietetic problems in eczema.

(4) The technique of the patch and scratch test is described.

(5) Infantile eczema is a dietetic problem.

(6) The Prausnitz-Kustner reaction proves the presence of sensitizing antibodies.

(7) Bacterial sensitization can possibly cause eczema.

(8) The epidermophyton simulates eczema in the viciousness of subjective signs. Objectively one mimics the other, but the trained eye can classify them.

(9) Glycosuria can be a cause of eczema.

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SOLID DOUBLE RUDIMENTARY UTERUS WITH ABSENCE OF CERVIX AND VAGINA*

BY ENSIO K. F. RONKA, M.D.†

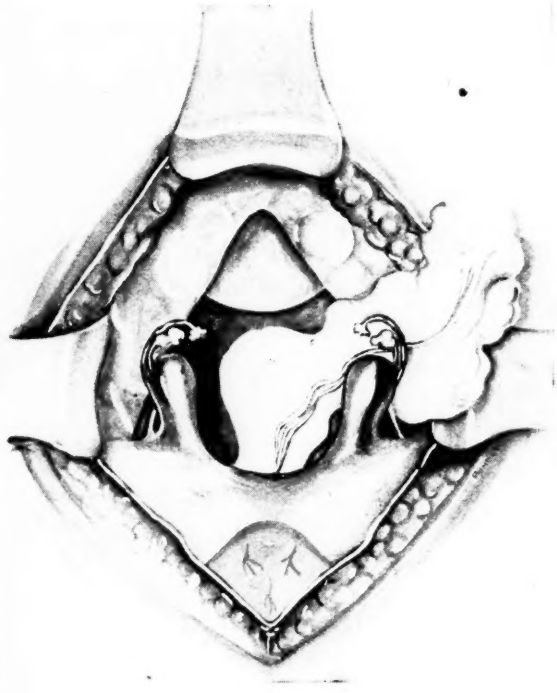
CASE HISTORY

MISS Lillian X, 23 years old, a school teacher, was admitted complaining of amenorrhea and occasional pain in the right iliac region. Her father was living; her mother died about a year ago from kidney complications. The mother's menstrual onset occurred at the age of twenty. The patient had one brother and two sisters living and well. Both sisters are normally developed and have a normal menstrual cycle. The patient had a vague idea of her physical deficiency, but evidenced no definite knowledge of any sex reaction. Her appetite was good; her bowels regular. A basal metabolism was not done. Other laboratory tests were normal.

Present condition: The patient was a medium-sized, well-developed, comely young woman with distinctly female traits. The breasts were well formed, semispherical, with normally developed nipples. Axillary hair was fairly abundant. The mons veneris and labia majora were covered with a fairly profuse growth of virile hair. The bodily form was characteristically feminine. Labia minora and majora and the clitoris were normal in development. The urethral meatus was in the normal location, not pouting or enlarged. Below this urethral orifice was a thin, narrow semielliptical band of tissue suggesting a hymen. A vaginal portion was not discernible, only a slight invagination suggesting its usual location. A rectal bimanual examination disclosed no evidence of the existence of a muscular rudiment of a vagina or of a uterine body. Tenderness on deep pressure over McBurney's point.

Diagnosis: Defective vagina and uterus. Chronic appendicitis.

Operation: Under general anesthesia a suprapubic midline incision was made. The underlying recti muscles were separated, the transversalis fascia and peritoneum cut and the peritoneal cavity exposed. The symphysis was high and prominent, the bladder riding high. Behind this, lying against the lateral pelvic walls, were two elongated, convex, solid rudimentary uterine bodies covered with peritoneum, measuring about five centimeters in length and about six and a half centimeters in circumference. As already stated these uterine bodies felt solid though a partly excavated uterus could not absolutely be ruled out, particularly as they were left in situ and not opened. These uterine bodies were separated from each other by a fairly broad, solid sub-peritoneal band from thirteen to fifteen centimeters in length. No cervix portio-vaginalis or vagina could be demonstrated from the operative field, or anything that could be interpreted as a rudimentary development of the above-named parts. The round ligaments arose from the anterolateral surfaces of either uterine body as solid rather short bands about four millimeters in thickness, extending toward the inguinal canals. From either uterine body, somewhat posterolaterally, there was also derived a fully developed tube, not unlike a tube of a normally developed female, with a normally appearing fimbriated end which opened into the abdominal cavity. The serosa was smooth and shiny. The ovaries, size of an almond, were also fully developed, freely movable, with smooth surfaces through which one could differentiate what apparently were isolated follicles. Previous to the first visit the patient had had a series of intramuscular injections of an ovarian follicular hormone, after which she had developed what apparently were definite cramp-like pains, the first that she had ever experienced. This leads one to question whether this stimulus had actually originated follicular activity in her ovaries. Both ligamenta ovarii propria



were quite short and slender. The rectovesical ligament was not seen. Both broad ligaments were normal in development. The rectum and the bladder were not attached to each other.

The serosa of the cecum was slightly injected. An appendix bound down by adhesions was removed by inverting the stump into a cuff formation. Numerous small adhesive bands which were in close association with the left uterine body and the sigmoid were separated. No other operative procedure was undertaken and the abdomen was closed. The patient made an uneventful recovery.

Embryology: This case of uterus solidus rudimentarius duplex separatus illustrates one of those rare and always interesting interruptions in the embryological development of the female genital tract.

The genesis of incomplete fusion of Müller's ducts is still quite unsettled. Normally the uterus and vagina develop by certain definite stages from the Müllerian ducts, which, originating as furrows in the thickened epithelium on the ventrolateral fold of each urogenital ridge, outline themselves gradually and assume defi-

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nite form in the second month of embryonic life. Because of the complicated development of the uterus and vagina from these ducts, it is self-evident that any disturbance in the formation or the later fusion of the Müllerian ducts would affect these two structures. The whole phenomenon of incomplete fusion of the Müllerian ducts is undoubtedly one of arrest of development. This arrest may be brought about by various factors such as: (1) Certain biochemical changes affecting the developmental cycle. (2) Mechanical and inflammatory processes disturbing nourishment and growth maintenance. (3) Excessive dilatation of the allantois and of the hind gut arising from it. (4) Nervous disturbances.

The influence of any of these factors apparently results in a check of the growth of the Müllerian ducts in their upper portions, resulting in a lack of fusion, while the growth in their lower portions is completely arrested.

Summary: The operative inspection had thus established to the satisfaction of Dr. H. J. Lee, my consultant, and me, certain facts not clearly evident in the preoperative rectal examination, namely, that this patient had two rudimentary atresic uterine bodies, lying about fifteen centimeters apart, connected with each other by a smooth connective tissue band and that attached to each rudimentary uterine body were normal adnexa. Also that the cervix, portio-vaginalis and the vagina were totally lacking.

As there was no possibility of conception and childbirth in this case because of the apparently solid rudimentary uteri, the question of a plastic operation for the sole purpose of forming a vaginal canal was not considered justifiable.

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THE POSSIBLE SAVING OF LARGE SUMS IN HOSPITAL ADMINISTRATION

Dr. Carmen Haider of Columbia University who has investigated conditions in the department of hospitals of New York City feels that there might be a saving of approximately $1,000,000 in 1933. This was announced by the Citizens' Budget Commission. This saving is exclusive of the $1,574,831 in wages of temporary employees which was retained in the 1933 budget. These estimated savings, according to the report, include drastic reductions in the number and salaries of the central administration staff and employees not assigned to particular hospitals, and also the possibility of reducing the expenses of the personal service items especially in food and supplies without impairing either the quality or quantity.

Within recent years the hospitals have become overcrowded with no relief in sight because of the large expenditures for maintenance and new buildings. Suggestions for economy apply particularly among department employees where it has been found that 12,000 are engaged in the care of 18,000 patients. This tends to a reduction in the salary of nurses which is estimated to average at the present time about $2,000 a year. In this service it is found that nurses are paid better on the whole than those engaged in private work because of the consideration of maintenance and pensions. The suggestion is offered that the wage scale should be made to conform with that prevailing in private institutions.

The report also considers the problem of temporary employees and declares that the method of appointment leads to serious abuses especially in hiring persons unfit to care for hospital patients, many of whom are too old for effective service. These suggestions may be of advantage to hospitals in other localities in dealing with similar problems.

HOW TO DEAL WITH TUBERCULOSIS

Dr. Kendall Emerson, Managing Director of the National Tuberculosis Association, has summarized nine general principles relating to the problems of tuberculosis which are as follows:

1. Tuberculosis still kills more persons between the ages of 15 and 45 than any other *disease.*
2. Tuberculosis is the *greatest cause of death* between the ages of 20 and 40. This includes accidents.
3. One out of every five persons who die between the ages of 15 and 45 dies of tuberculosis.
4. One out of every three young women who die between the ages of 15 and 30 dies of tuberculosis.
5. There are 85,000 deaths from tuberculosis each year in the United States.
6. There are 500,000 others ill of tuberculosis at any given time. Each one of these may pass the disease on to healthy persons, and many would if it were not for the work of our associations.
7. Tuberculosis kills more children under 21 than *any other communicable disease.*
8. It is estimated that 2,000,000 children have been infected with the germs of tuberculosis—and it is from these children that most of the active cases will come in later years.
9. In cities, practically all adults tested show a positive reaction to tuberculosis. This indicates that the menace of tuberculosis is still as great as ever. It is merely lying in wait for an opportune time to break forth.

CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

EDITED BY RICHARD C. CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 18471*

THREE WEEKS' JAUNDICE

MEDICAL DEPARTMENT

PRESENTATION OF CASE

DR. CHESTER M. JONES: This patient came into the Baker Memorial with the complaint of weakness and jaundice of three weeks' duration. He was a sixty-three year old Nova Scotian painter.

The story is very brief. He had acute sudden onset of pain in the right wrist four weeks before admission and the following day similar pain in the left wrist. He stopped work, remained in bed and consulted a doctor, who gave him a cathartic but no medicine for relief of the pain. The patient had been slightly constipated. The pain in the wrist was in the carpal region, without reddening or wrist drop. It was very severe for two or three days and stopped after a week. He was very weak, had no abdominal pain, but occasionally vomited after meals. His stools were white. He complained of considerable gas and belching. Three weeks before admission he noticed some jaundice; at the same time the urine was dark. He had no fever and his gums were not sore. He had used no lead paint for the past four months and only infrequently before that.

The past history was negative.

When he entered the hospital he was obviously a very sick and very jaundiced man who was extremely dehydrated. He was not disoriented but was very hard to rouse. He had a normal heart. The blood pressure was 180/100. The liver dullness in the midclavicular line was at the fourth interspace and extended to the seventh. It seems as if it was smaller than normal even at admission. The spleen was not palpable. There was no dullness in the flanks.

On the first day the routine laboratory tests showed a red count of 2,000,000 cells. The hemoglobin was 75 per cent. That figure, however, is worthless in the face of intense jaundice. The white cell count was normal. There were 70 per cent polymorphonuclears. The smear showed slight achromia, slight variation in size and shape and rare stippled cells. There were four positive guaiacs out of six stool examinations. The bleeding time was 1½ minutes, the clotting time 21 minutes. The bromsulphophthalein test showed 100 per cent retention of the dye. The non-protein nitrogen was normal. He vomited on one or two occasions; the vomitus was essentially negative. He had had a very slightly elevated temperature from the beginning.

On admission it was almost impossible to arouse him and get a logical statement. He was treated with intravenous glucose for a few days. He improved for four or five days. After that he became a little more drowsy from day to day until finally he became comatose. He died thirteen days after his admission.

*The following report gives the essentials of two discussions, one in Dr. Cabot's Third Year class, one at a conference of the hospital staff.

CLINICAL DISCUSSION

In Third Year Class

DR. RICHARD C. CABOT: "There was no wrist drop," which of course on account of his occupation we should be thinking of. I doubt if we shall be able to make anything out about lead in this case.

So far as one can judge by percussion, the liver was small. But liver percussion, especially when it shows diminution of liver dullness, is not a reliable test. In any case showing marked jaundice we are always wondering about yellow atrophy and also about liver dullness. On the basis of that percussion of the liver, I would not exclude the possibility that that liver is diminished in size.

If a man has enough lead in him to hurt him he does not have "*rare*" stippled cells. He has so many that one cannot miss them in any field.

Bleeding does not mean anything diagnostically. Anybody jaundiced might bleed from any point. That does not tell us the cause of the jaundice at all.

The liver function tests show very extensive liver damage. It cannot possibly be gall stones; it cannot possibly be catarrhal jaundice. It can be an extensive cirrhosis of the liver; it can be acute yellow atrophy. If he had cancer of the liver he probably would not have been drowsy and difficult to arouse.

This is a case of acute yellow atrophy of the liver, to the best of my knowledge and belief. We do not need to consider malignant disease or cirrhosis, of which we have no considerable evidence. The only other possibility is acute toxic hepatitis or acute yellow atrophy of the liver.

A STUDENT: Do you think acute yellow atrophy has any relation to acute arsenic poisoning and the fact that he was a paper hanger?

DR. CABOT: I do not think it has any relation to arsenic in the amounts people get it in paper hanging.

DR. MAURICE FREMONT-SMITH: Do you suppose his doctor gave him neocinchophen?

DR. CABOT: That is possible. Miss Painter was the first to notice in the records of people who had died of acute yellow atrophy that they had been taking one or another of the patent medicines containing cinchophen. We had a series of such cases in which it was proved.

A STUDENT: What was the pain in the wrist?

DR. CABOT: I have no idea as to the pain in the wrist. It is not a symptom of acute yellow atrophy or of any other disease that we ought to consider here. All we can say in relation to that is that in at least 90 per cent of the cases, when we match up the signs and symptoms with the autopsy findings there is at least one thing for which we never find the cause. So if Dr. Mallory does not find the cause of that the only thing is to keep it in mind and hope that it will be explained later.

CLINICAL DISCUSSION

At Staff Conference

DR. JONES: As I recall it, at admission the case was thought to be acute yellow atrophy, although there was also a question of abdominal malignancy. I thought it was acute yellow atrophy, cause unknown. He did not receive any medication except intravenous glucose. In retrospect one might have considered lead poisoning. I never thought of it at the time. There was no important stippling in the smear and no lead line. The liver was small to begin with and I think it diminished a little in size during the ten days that I followed him. The differentiation between a diagnosis of intrahepatic disease of some serious character, toxic in nature, and a complete block due to an extrahepatic growth such as cancer of the head of the pancreas, was not very difficult to make. At least in my experience it has been very uncommon to have malignancy causing a block of this nature with as high a dye retention as this man showed, particularly in the absence of enlargement of the liver. The course of his illness, which was relatively rapid, would certainly bear out acute yellow atrophy.

CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Acute yellow atrophy.
Pulmonary edema.

DR. RICHARD C. CABOT'S DIAGNOSIS

Acute yellow atrophy of the liver.

ANATOMIC DIAGNOSES

Subacute yellow atrophy of the liver.
Jaundice.
Ascites.
Dilatation of the esophageal veins, moderate.
Bronchopneumonia, slight.
Pulmonary emphysema.
Arteriosclerosis, moderate, aortic, coronary and renal.

PATHOLOGIC DISCUSSION

DR. TRACY B. MALLORY: We found at autopsy a typical acute yellow atrophy. His liver weighed 1000 grams, from a half to two thirds normal size, and was shrunken, particularly in the left lower lobe, which was perhaps not more than seventy-five grams in weight. It seemed to us atrophic and very flabby. Its surface was irregular when we cut into it. We found alternate areas of reddish depressed scars and nodules of bright greenish yellow liver tissue standing up from that, showing the typical appearance of so-called acute yellow atrophy, in which the atrophic portion is really red. It is the regenerating portion that is really yellow. The process was not very recent. In a very fresh acute yellow atrophy it is not unusual to find a liver weighing as little as 600 grams. This one had gone back to 1000. I think I should probably call it a subacute case, simply meaning that he had lived long enough to regenerate a fair amount of liver tissue.

He had begun to develop a moderate amount of ascites, as these cases often do. He had dilatation of the esophageal plexus of veins, something which if it had gone on a few weeks or months longer might have resulted in varices and terminal hemoptysis.

In addition we found a slight degree of bronchopneumonia. There was moderate emphysema and a fairly marked arteriosclerosis.

The case is very interesting with this story apparently starting off with arthritis. We get many cases of acute yellow atrophy starting with arthritis, then the taking of a cinchophen compound and the development of acute yellow atrophy. We always assume that it is due to the cinchophen compound. One naturally questions the accuracy of his story.

DR. JONES: I talked to his doctor and he said that no other medication had been given. I could not get any light from the patient's family.

DR. MALLORY: It is worth while to remember that acute yellow atrophy can and for that matter usually does occur from other causes and that the actual epidemic occurrence of acute yellow atrophy in connection with epidemics of jaundice has been reported, particularly from Sweden and Finland. I recently saw in a report* from the University of Upsala that in the city of Gottenborg, where the population is 230,000, the average number of cases of catarrhal jaundice per year was about fifty and the average number of cases of acute yellow atrophy was about one per year. In the year 1926 there were 365 cases of catarrhal jaundice and ten cases of acute yellow atrophy. In the same family two children had catarrhal jaundice and the third child died with acute yellow atrophy. So that at least certain cases of acute

*Wallgren, Arvid. Acta Med. Scand. Supplement XXVI:118, 1928.

yellow atrophy are undoubtedly infectious in origin. I think we have been perhaps a little too eager to assume that merely because a drug was given it was the cause of the atrophy.

Editorial Note

In this connection it is worth while to note the reports on *Toxic Cirrhosis Due to Derivatives of Cinchophen*, M. W. Comfort, and *The Pathologic Anatomy of the Liver in Cases of Poisoning by Cinchophen*, D. C. Beaver, in the Proceedings of the Staff Meetings of the Mayo Clinic for July 20, 1932 (7:29, 419 and 425). Dr. Comfort writes: "Every case of so-called catarrhal or epidemic jaundice should be considered toxic cirrhosis until all toxic agents have been eliminated as etiologic factors. Moreover, cases of toxic cirrhosis are potentially more serious than those of catarrhal jaundice, with which they are often confused. A mild process may become severe and progress to extensive atrophy and death. Subclinical or even clinical cirrhosis may result. Treatment should be considered imperative and should be begun early."

Dr. Beaver writes: "Dr. Robertson and I have previously described the pathologic anatomy of the liver as observed in five fatal cases of poisoning by cinchophen. This report was presented before the annual meeting of the American Association of Pathologists in Cleveland, April 1931. Although at that time, including our cases, there were 57 such cases reported in the literature, with 32 deaths, our report was received with some skepticism by certain members of the association. . . . Since our previous report our conclusions have been amply substantiated by other communications. Skepticism concerning the toxicity of cinchophen has been almost entirely confined to experimental observers. . . .

"From clinical deductions such as Dr. Comfort has presented, it is evident that less than immediately fatal reactions also exist from which the patients slowly recover. Nevertheless, we may anticipate from the pathologic viewpoint that the restoration of the patients to clinical normality probably does not always signify complete anatomic restoration of the liver, but rather that in some of these cases the liver is in a stage of subclinical cirrhosis, which may at some future time become decompensated."

The discussion concludes with the following report (page 427):

Derivatives of Cinchophen and Their Toxicity

P. S. Hench, M.D., Division of Medicine: We are indebted to Dr. Comfort for calling our attention again to the serious toxic reactions which may occur following the use of cinchophen and its derivatives, and particularly for reassuring us that in some of these cases, even when marked toxicity occurs patients may recover dependent on supportive measures to the liver or on its natural restorative powers. We have become rather uneasy because of recent reports and because of the experience of this Clinic in caring for five patients who were brought here with acute insufficiency of the liver from phenylcinchoninic toxicity, terminating fatally.

Cinchophen is sold in so many preparations and under so many names that it is almost impossible for patients taking medicine for chronic pain to avoid it at one time or another. It would seem well to keep in mind the names of the more widely advertised preparations containing cinchophen (phenyl-quinoline-carboxylic acid). These are

Acitrin
Agotan
Artamin
Atochinol (atoquinol)
Atophan
Atophanyl
Atophanurotropine
Biloptin (diiodo-atophan)
Cass rheumatism treatment
Chloroxyl
Cinchophen (many brands)
Fantan
Farastan (mono-iodo-cinchophen)
Harrell's rheumatism cure
Hexophan
Iriphan
Isatophan
Leukotropen
Lytophan
Neocinchophen
Novatopan
Oxyliodide
Paratophan
Phenylcinchoninic acid
Phenoquam (phenoquin)
Quinophan
Renton's rheumatic tablets
Synthaline
Sulphatophan
Tolysin
Van Ard's (sanatorium treatment) rheumatism remedy
Weldona tablets* (?)

Some of the preparations listed here fulfill the requirements for acceptance by the Council on Pharmacy and Chemistry of the American Medical Association. Others have been rejected for inclusion in *New and nonofficial remedies* because of their irrational mixtures and misleading names and still others have been frankly exposed as forms of quackery (Cass, Harrell's, Renton's, Van Ard's and Weldona).

Besides the known drugs that contain cinchophen I have accumulated the names of 500 "rheumatic," "rheumatism," and "antigout"

*Weldona at one time had cinchophen in it and was accused of causing a death. Subsequent samples as analyzed by the American Medical Association did not contain cinchophen.

remedies, or "uric acid solvents" advertised in American drug lists, scores of which undoubtedly have cinchophen as their base.

Nonfatal toxic reactions other than hepatitis have been reported after the use of atophan, atophanyl and cinchophen. Acute hepatitis with jaundice and recovery has occurred after the use of atochinol (atoquinol), atophan, biloptin (diiodo-atophan). Cass rheumatism treatment, cinchophen, farastan (mono-iodo-cinchophen), neocinchophen, oxyliodide, Renton's rheumatism remedy and Weldona tablets. Death has been reported as occurring after the use of atochinol (atoquinol), atophan, biloptin (diiodo-atophan), cinchophen, farastan (mono-iodo-cinchophen), Harrell's rheumatism cure, oxyliodide, quinophan, tolysin and Weldona tablets, usually as a result of acute hepatitis.

The manufacturers of the preparations against which there are no reported "blackmarks" would, of course, like us to believe that their preparations are more safe and relatively nontoxic as compared with the others. This is probably not true, however, but depends on volume of sales and relative degree of absorption of each one.

Physicians are asking what should be done about cinchophen. The authors of two recent surveys have frankly urged that the use of cinchophen be abandoned entirely. In rebuttal and in defense of the use of cinchophen an investigator for one of the large concerns manufacturing cinchophen products while in no way trying to disregard reported cases of poisoning which he analyzed fully, published a report with data supporting the conclusion that cinchophen poisoning is really rare, and that the use of cinchophen may be justified in spite of its occasional toxicity, inasmuch as we use other therapeutic agents which have at times toxic, even fatal effects. Nevertheless the victim of severe hepatitis and the physician and relatives of a patient who has died will find little consolation in statistics on the relative infrequency of such intoxications.

Many cases of nonfatal, even fatal, toxicity are probably unreported or unrecognized, and the present yearly rate of about six reported deaths throughout the world will doubtless increase as the condition receives wider recognition. In the face of many deaths the continued use of cinchophen must be justified on definite grounds that in a particular case its use alone gives relief or much greater relief than less toxic analgesics.

We must conclude, from the basis of our present knowledge, that if other available analgesics are effective, cinchophen products should be avoided. Where the former are ineffective, a trial of the latter seems indicated.

CASE 18472

ABDOMINAL PAIN AND CHILLS

MEDICAL AND SURGICAL DEPARTMENTS

PRESENTATION OF CASE

DR. EARLE M. CHAPMAN*: This is the case of a twenty-six year old single American salesman.

The story was that four days before entry he had been up rather late at night, had committed some dietary indiscretions and had been drinking a little. He awoke at six o'clock the next morning with epigastric pain and nausea. During the day he felt pretty well, was able to be up and about and to play some golf. At noon he had more severe pain, localizing just below his umbilicus, with occasional stabs to both lower quadrants. Three days before entry he awoke at four o'clock in the morning with a severe shaking chill lasting twenty minutes. Following this he had considerable malaise, fever, and some vomiting. Through that day he was sick. The next afternoon, the second day before entry, he had a second chill. Throughout that day he continued to be rather sick with the upper abdominal pain and vomiting. His temperature ranged between 101° and 102°. The day before entry he had a third chill, but got up, ate three regular meals and went about his business as a salesman. The morning of entry he felt well and decided to drive from Albany to Boston. On the way he had many chills, felt feverish, and was so sick that he stopped at one point and wrote a letter giving directions as to what was to be done if anything happened to him. He arrived in Boston and entered the Baker Memorial.

The past history is non-contributory, but it was interesting to note that one year before entry he had an attack of epigastric pain relieved by food and milk. After he had been on a bland diet for three weeks the symptoms entirely disappeared.

His habits were irregular. His meals were very irregular because of his work. His alcoholic intake varied from a pint to a quart a week.

At entry the chief complaint was abdominal pain.

On physical examination he was obviously quite ill. He was feverish and flushed. Although he said that he had been a little yellow, we were not able to see jaundice by the poor light at night. The right lower quadrant was slightly tender. There was no spasm. Rectal examination showed slight tenderness high on the right side. Otherwise his physical examination was normal.

Laboratory data. The urine was normal at entry, and the white blood count 8,700. On the second day the count jumped to 13,700. The

*Resident on the West Medical service.

differential was normal. There were 76 per cent polymorphonuclears. The stool was negative. Blood cultures done for typhoid and Brucella were negative. A Widal test was negative. Repeated cultures on the stools for typhoid, paratyphoid and dysentery were negative.

His chart on the Medical service showed a temperature of 101° to 102.8°. The afternoon of the third day the temperature went down to 97.2°. That day he was free from pain, felt well and ate three regular meals. Everyone was encouraged. It was noticed then that he was a little jaundiced and still had abdominal tenderness. On the fifth day the jaundice was more marked, the icteric index was 15 and dull epigastric pain had returned. Rebound tenderness was obtained by palpation of the right lower quadrant, and a vague mass was felt in this region. Tenderness by rectum was still present in the right vault. X-rays were all considered to be negative. After the fourth day the white blood count was always elevated, 18,950 to 45,200.

On the sixth day after entry operation was done. After that he had more abdominal pain and severe chills. The temperature rose to 101.5°-104° daily. The jaundice deepened so that by about the fourteenth day after entry the icteric index had risen to 20.

On the seventeenth day a second operation was done. Following that he was quite jaundiced, suffered considerable abdominal pain and nausea and was having repeated chills at irregular intervals. He held out very well for several days with the aid of two transfusions. Then he became more and more jaundiced, lost weight very rapidly and went downhill to death on the thirty-fourth day after he entered the hospital.

DR. CHESTER M. JONES: Was his diaphragm fixed at any time?

DR. CHAPMAN: No, it was not. There were no findings suggestive of liver abscess. At one time there was limited motion of the diaphragm on the left side only.

CLINICAL DISCUSSION

DR. CHAPMAN: At the first operation the appendix was found to be acutely inflamed and was removed. This seemed to be part of a general inflammatory mass which involved the cecum and extended along the great vessels. The retroperitoneal area was firm and edematous.

The second operation was an exploratory laparotomy. The preoperative diagnosis was possible large liver abscess, but none was found. The gall bladder was drained.

DR. J. H. MEANS: What sort of material did they get when they drained his gall bladder? Was it purulent?

DR. ARTHUR W. ALLEN: It was clear bile. The gall bladder was very large.

DR. WILLIAM B. BREED: Of course the problem is whether he should have been operated on before he was. I saw him at his home at eight o'clock at night with the story that you have heard. I told him and his family that I did not know what the trouble was, but I felt that he was sick enough to be in a hospital. The next day his sclerae were somewhat icteric. I did a rectal examination and found that he did have some tenderness on the right, but I could find no mass. As you know, his white cell count and differential were essentially normal. Two days after his admission he apparently was getting well. At no time up to the fifth day here did he have any evidence of peritoneal irritation. He did have some tenderness in the right lower quadrant but he never complained of any pain there except on palpation. His pain was persistently in the epigastrium.

After the operation, about which I should like to have Dr. Allen tell you something, I toyed with the idea that he might have had typhlitis at first, then an incidental appendix on the fifth day of his stay here. I do not know how a diagnosis of acute appendicitis could have been made any earlier; and if it could have been, I doubt whether it would have made any difference in the outcome, particularly after the history of chills a week prior to the operation.

Dr. Mallory will tell you about the cecum. Apparently there was no clear cut induration or inflammation of the cecum at the time of postmortem examination. I assume that if it had been there it had quieted down by the time he died.

DR. ALLEN: This mass that was supposed to have been felt by rectum was palpated at the time we decided to do a surgical exploration. He also had definite tenderness in his right lower quadrant with the suggestion of a mass in that region. The fact that he had chills with the onset and was immediately jaundiced made us feel that he probably had pylephlebitis and that the prognosis was very grave. We assume of course in these cases that the origin of the infection is in the appendix. This may be entirely erroneous. It is perfectly possible that the infection may get into the portal system in some other manner. At the time of operation the appendix was definitely acutely inflamed throughout its entirety, but so was the cecum. The wall of the cecum was thickened and indurated for quite a distance up on the outer side. In addition to that was this edematous, firm mass which could be felt running along the great vessels. This is the only time that I have ever actually observed retroperitoneal swelling at operation in this dreaded disease, pylephlebitis. It probably is present more often at some stage of the process than we ordinarily think.

At the time of the second exploration, sixteen days later, the induration in the cecum had entirely cleared up and all of this retroperit-

oneal tumor was gone, that is in the region of the lower portion of the abdomen, but there was a layer of retroperitoneal swelling still left in the upper abdomen in the region of the vessels and ducts of the liver. The gall bladder was so distended that it seemed to me worth while to open and drain it.

The hope of perhaps finding a single liver abscess was based on one case which came to autopsy from the wards here perhaps two or three years ago, in which we had a pylephlebitis which had the same story that this patient did and finally came to autopsy. One large liver abscess was found which could have been drained. It is only fair to state that two unsuccessful attempts were made to find it before the patient died.

The onset of abdominal pain with chills and fever gives one a very decided fear as to the outcome of the condition. Of course this patient undoubtedly would have been just as well off whether he had had his appendix out or not. Whether the diagnosis might have been made during the first twenty-four hours of his attack and the appendix removed with a different outcome is hard to say. I think, however, it is very unlikely that it would have made the slightest difference, because he had chills at the onset.

CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Pylephlebitis.
Liver abscesses?

ANATOMIC DIAGNOSES

Acute appendicitis.
Pylephlebitis.
Multiple abscesses of the liver and mesentery.

Pathologic Discussion

Dr. Tracy B. Mallory: At the autopsy we found an enormously enlarged liver and scattered throughout its substance innumerable abscesses varying in size from those of microscopic character up to one or two of the largest ones which were 3 to 4 centimeters in width. Throughout the mesentery numerous abscesses were also found which did not appear to be located within the veins but to represent broken down lymph nodes. If there had been a thrombosis within the vein it had pretty well healed and recanalized. From the surgical point of view, of course, it would have been utterly impossible to do anything with that liver. There were too many separate abscesses to make effective drainage possible.

In the neighborhood of the cecum just around the stump of the appendix a few calcified masses were found which were probably calcified lymph nodes of a healed tuberculosis; otherwise no evidence of a preceding inflammatory process was found there.

Dr. Allen G. Brailey: What was the organism, Dr. Mallory?

Dr. Mallory: We failed to get any in culture, and we were unable to demonstrate any in stained smears.

Dr. Breed: It is difficult to believe that the appendix, which was removed in a very acute stage of inflammation, could have been the cause of the initial onset of one week before. Would you not expect it to have ruptured or have shown more evidence of chronicity in a week?

Dr. Mallory: I think it is very hard to estimate from a microscopic section the duration of an appendiceal inflammation. The presence of eosinophiles ordinarily means that the process has been going on for three or four days, but I do not think we know enough to estimate time factors exactly. Certainly an appendix can smoulder along for a week without perforating; that is common enough.

Dr. Brailey: Is it not queer that you did not find any organisms?

Dr. Mallory: Theoretically but not practically. We fail only too often. If we did anaerobic cultures as a matter of routine we should get a higher percentage of positives undoubtedly.

Dr. Allen: How do you feel, Dr. Mallory, about the appendix being the original focus of infection for the pylephlebitis?

Dr. Mallory: I am inclined to think it was, although I do not think we have any positive proof of it. Certainly the majority of these cases start with a somewhat atypical but almost always suggestive story of appendicitis. How often have you seen a simple appendix start with a chill?

Dr. Allen: It is very rare. We had one case come into the Emergency Ward about a month ago, a little girl with a definite attack of appendicitis with a chill. We were extremely anxious about the outcome. She proved, however, to have a pyelitis, which we thought explained her chill. She showed at operation no sign of retroperitoneal inflammation and made a good recovery from operation. I think, however, the cases that do come down with a chill and that go on to a proved diagnosis of pylephlebitis are fairly rare. I should think we have perhaps no more than one a year in this hospital, though I do not think it has been looked up. It may not be more than one in two or three thousand cases. How many cases of appendicitis do we have in a year?

Dr. Mallory: I should say about five hundred.

Dr. Allen: It may be a little more common, then, than I thought.

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THE PLIGHT OF DOCTORS AND HOSPITALS

A VERY common subject for discussion among physicians and hospital officials is the present and prospective economic uncertainty respecting adequate income. On the average, doctors have fewer patients than formerly and a greater proportion of the free and deferred payment classes. Since ethical medical practice cannot resort to ordinary business methods for securing income-producing work, there seems to be very little that can be done other than to wait for the time when the doctors' services shall be more generally required. It is believed that the better health conditions now existing will be likely to continue except in times of uncontrollable epidemics such as waves of influenza, and therefore doctors, with some exceptions, must be prepared for an unpredictable continuance of hard times. It also seems probable that remunerative practice of physicians who care for low income groups will respond slowly to better employment conditions because accumulated unpaid bills will accentuate the too common custom of leaving the medical attendants' charges unpaid until other obligations have been met.

Banks report that the savings of the people have been drawn upon to a large extent and that borrowing capacity is at a low ebb.

All of these factors are operating and may increase before substantial evidences of recovery from the depression will have taken place. The outlook for the doctor is not comforting, and fortunate is he who has a reserve for the rainy day. With respect to hospitals those of the voluntary class are especially concerned because they have been built and equipped to meet conditions of previous years both as to the demand for service and the estimated ability of communities to meet the usual differences between the cost of maintenance and the ability of patients to pay. Many very useful institutions are in a precarious condition because the usual contributions to meet deficits have been reduced or even omitted. In a report of conditions in Pennsylvania, it is stated that "patient revenue in many instances is less than half what it was," that income from endowments "is no longer a bulwark" and that "there is practically no income from voluntary gifts and contributions".

In order to meet similar conditions in New York the rates for carrying Workmen's Compensation cases have been increased and in some states by legislative enactment a priority lien on payments to patients treated for injuries resulting from automobile accidents is provided. It has also been suggested that higher rates for patients for whom states or municipalities are responsible should be arranged.

In England, where the hospital situation is very acute, the question was raised as to the necessity of the state's assuming responsibility for the voluntary hospitals. This was referred to a committee. The report of this body was definitely in favor of encouraging continuance of the voluntary hospitals and a grant of five hundred thousand pounds was distributed as needed.

In addition, 270 hospital contributory schemes have been devised, with an enrolled membership of approximately 6,000,000 and annual payments to voluntary hospitals of 2,500,000 pounds, this being from sixty to seventy per cent of the income of the voluntary hospitals in Great Britain.

We may feel that conditions are not so alarming in this country but the end is not yet, for the depression is not over and, according to the report of the Secretary Treasurer of the International Hospital Association, 110 voluntary hospitals in this country have had to suspend.

It will be a public calamity if community hospitals are seriously hampered in caring for the lower income classes and communities should

carefully study insurance and contributory plans which may enable hospitals to carry on.

Doctors have heavy burdens and should be considered in any plan for supporting hospitals. The time will come, we predict, when much of the now free medical service given to indigent and hospital patients by doctors will be paid for. If the indigent are fed and clothed at public expense and cared for when ill, there is a real element of injustice if the doctor's remuneration is not considered. The doctor's rights are equal to those of the merchant. He now gives much time and skill and, in addition, is taxed to support those under public care.

THE WALTER E. FERNALD PLAN

If psychiatrists, psychologists and many of the older general practitioners of this Commonwealth see the heading of this account of one of the great forward movements in public health activities, we are confident that the article by Dr. Neil A. Dayton will be read with interest and profit. We urge the younger men in the profession to read carefully the recital of the accomplishments of Dr. Walter E. Fernald, who will always stand as one of the great benefactors of the people of Massachusetts.

With the vision of the pioneer and the spirit of the crusader, Dr. Fernald first saw the great need of mentally retarded and defective children and then put his soul and heart into the problems of helping these unfortunate members of society. Having acquired recognition as a leader in dealing with mentally defective children, he worked untiringly to arouse the medical profession and the legislature to the importance of prevention as well as treatment in considering the psychiatric problems of this group, with the result that an appropriate law was enacted in 1919 and made more applicable to existing conditions under an amendment in 1922.

A careful examination of Dr. Dayton's article will arouse concern among the members of the medical profession which should lead to active coöperation by all who deal with children. Probably less general interest in the care of deficient children pervades the medical profession than is devoted to more dramatic types of ill health, but this lack of interest should challenge the attention of all physicians because, in addition to the humanitarian appeal, there are great economic and moral reasons for helping these children to become useful and happy members of society.

THIS WEEK'S ISSUE

Contains articles by the following named authors:

Dayton, Neil A. M.D. Ohio State University College of Homeopathic Medicine, 1915. Formerly, Assistant Superintendent, Wrentham State School, Wrentham, Mass. At present, Director of Research and Director of Division of Mental Deficiency, Massachusetts State Department of Mental Diseases. Instructor in Psychiatry, Tufts College Medical School. His subject is "The Walter E. Fernald Plan for the Examination of Retarded School Children." Page 913. Address: 109 State House, Boston.

Evans, William. A.B., M.D. Johns Hopkins University School of Medicine 1930. House Officer, Peter Bent Brigham Hospital 1930-1932. His subject is "Venous Pressure." Page 934. Address: 800 Edison Avenue, Detroit, Michigan.

Macdonald, William Joseph. M.B., Ch.M., M.D. University of Sydney Medical School, Australia 1914. Dermatologist, Carney Hospital, South Boston. Consultant in Dermatology, Cambridge City Hospital. His subject is "The Etiology of Eczema." Page 940. Address: 270 Commonwealth Avenue, Boston.

Ronka, Ensio K. F. M.D. Boston University School of Medicine 1927. Assistant Visiting Surgeon, Massachusetts Memorial Hospitals. Courtesy Staff, Quincy City Hospital. Assistant in Anatomy and Surgery, Boston University School of Medicine. His subject is "Solid Double Rudimentary Uterus with Absence of Cervix and Vagina." Page 945. Address: 15 Bay State Road, Boston.

MISCELLANY

THE HARVARD INFANTILE PARALYSIS FUND

Contributions in support of the work of Harvard Infantile Paralysis Commission have been acknowledged by Kidder, Peabody & Co. amounting to $6,238.00 through Saturday, November 19.

DR. BENJAMIN SPECTOR RETURNS FROM EUROPE

Dr. Benjamin Spector, in charge of the department of anatomy of Tufts College Medical School, returned from Europe this fall where he spent several months in study and research. He visited various laboratories and institutions in Germany, Holland, France and England. His research on the internal ear was completed and was published in the October issue of the *Anatomical Record*. This work was carried out in the Pharmacological Laboratory der Rijks Universiteit, Utrecht, Holland.

Dr. Spector brought back with him a copy of one of the earliest microscopes, employed by Antony van Leeuwenhoek, which was presented to him by Dr. van Cittert of the Physical Laboratory in Utrecht. Professor Dr. H. M. de Burlet of the Department of Anatomy in Groningen, Holland, presented him with two rare volumes, dated 1725, of the Opera Omnia Anatomica et Chirurgica of Andreas Vesalius.

While working in the Hunterian Museum of the

Royal College of Surgeons, in London, England, he was granted permission by Professor Sir Arthur Keith, the Conservator, and Sir Buckston Browne, the Donor of the House of Darwin to the British Government, to have photographs taken of the "Old Study" where Darwin wrote his epoch-making book on the Origin of Species. Lord Berkeley Moynihan, President of the above college, made it possible for Dr. Spector to attend, as foreign representative, the various meetings of the British Medical Association.

THE RECORD OF THE BOARD OF REGISTRATION IN MEDICINE FOR THE YEAR ENDING NOVEMBER 30, 1931

The report submitted by the Board of Registration in Medicine to William F. Craig, Director of Registration, states that since the establishment of the Board in 1894, the fees received from applicants for registration, renewals and certified statements, and interest on deposits, and paid into the Treasury of the Commonwealth, amount to $273,236.56. The expenditures of the Board amount to $241,959.74 showing that the Commonwealth has received $31,276.82 in excess of the total amount expended. This means that the Board of Registration in Medicine has contributed a substantial sum to the Treasury of the Commonwealth, and yet very many of the functions of the Board have not been provided for by drawing upon this excess of more than $31,000.

We have always believed that the Board should be given a special investigator to secure such evidence as might be useful in dealing with the problems connected with the revocation of registrations.

The number of persons applying for registration during the year 1931 was three hundred and thirty-one. Of these, forty have been registered by virtue of their National Board registration, leaving two hundred and ninety-one who applied for examination for the first time this year, all but five of whom have been examined. Ninety-seven, who had failed in previous examinations, were reëxamined, making a total of three hundred and eighty-three examinations. Two hundred and ninety-two interne registrations and three hundred and fifty-eight student registrations have been granted.

The average rating of Class "A" medical schools in Massachusetts which have sent applicants for registration is from 79.1% to 82%, whereas the graduates of the Middlesex College of Medicine and Surgery have only averaged 67.6%, the Massachusetts College of Osteopathy 62% and the College of Physicians and Surgeons of Boston 70%. The passing mark which is required by the Board is 75%. Of the 41 graduates of the Middlesex College of Medicine and Surgery, 16 only were registered. Of the 10 graduates from the College of Physicians and Surgeons of Boston, 3 were registered. Of the 15 graduating from the Massachusetts College of Osteopathy, 3 were registered.

The report shows that the eclectic schools have been reduced now to two, from only one of which candidates have presented themselves during the past year and no school, not an osteopathic school, has, so far as is known, incorporated osteopathy in its curriculum.

In speaking of the quality of candidates the Board states that in 1931 there were registered in Massachusetts at least twenty candidates who would not even have been admitted for examination for registration as practitioners in any other of these United States, and referring to certain reflections on practitioners the Board states, "The matter of testimony of physicians in court proceedings has become a notorious scandal." The policy of the Board is to scrutinize with great care the court testimony of physicians. In several cases licenses have been suspended for sworn testimony which the Board has regarded as unprofessional conduct. Another aspect of medical practice in which the physician is shown in an unfavorable light is the participation of examining physicians in the promotion of illegitimate claims for personal injury. While the number of such claims may be large, it seems likely from the preliminary investigation that the number of physicians involved will not prove to be very great.

This document will be of value to anyone who is interested in the service rendered by this Board.

TWENTY-SIXTH ANNUAL CHRISTMAS SEAL SALE

On Thanksgiving Day the twenty-sixth annual sale of Christmas Seals for tuberculosis work is being inaugurated throughout the United States.

The National Tuberculosis Association through an arrangement with the American Red Cross reserves the period from Thanksgiving to Christmas for the Seal Sale. Under this agreement the period from Armistice Day to Thanksgiving is set aside for the Annual Red Cross Roll Call.

The Massachusetts Tuberculosis League and its Affiliated Organizations have been preparing for months for the Seal Sale throughout the Commonwealth. Seventy-five million Christmas Seals were purchased for sale in this State.

The Organizations which sell the Seals and carry on tuberculosis prevention work throughout the year retain eighty-five per cent of the proceeds of the Seal Sale for local use. Ten per cent is paid to the State League and five per cent is sent to the National Tuberculosis Association.

Although the Seal Sale throughout the United States in 1931 fell sixteen per cent below that of the previous year, the Seal Sale in Massachusetts fell behind only ten per cent.

The 1932 Seal represents two children singing Christmas Carols and is unusually attractive.

The Seal Sale in the main will be conducted through the mails. Many local Associations will supplement the mail sale with booths in hotels, department stores, post-offices and other public buildings.

HARVARD MEDICAL SCHOOL NEWS ITEMS

Scholarship Awards 1932-33

Name of Scholarship—Awarded to:

Edward M. Barringer, No. 1—Norman H. Bruce.
Edward M. Barringer, No. 2—Richard T. Munce.
Gordon Bartlett—John W. Norcross.
Gordon Bartlett—Don W. Freeman.
Matthew and Mary E. Bartlett—Robert O. Wilson.
Lucius F. Billings—Gilbert M. Jorgensen.
Orlando W. Doe—Kolbein L. Kjellesvig.
Joseph Eveleth, No. 1—Travis A. French.
Joseph Eveleth, No. 2—Robert T. Moulton.
Joseph Eveleth, No. 3—William G. Thompson.
Horace Putnam Farnham, No. 1—Robert W. Wilkins.
Horace Putnam Farnham, No. 2—Douglas A. Sunderland.
John Foster—Arthur J. Hadler.
Hilton, No. 1—Robert L. Brown.
Hilton, No. 2—Robert C. Darling.
William Otis Johnson—Wayne Hobbs.
Claudius M. Jones—Hollis S. Ingraham.
Alfred Hosmer Linder—William H. Goodson, Jr.
Joseph Pearson Oliver—Rolf Lium.
Joseph Pearson Oliver—Charles Rupp, Jr.
Charles B. Porter—William L. Wallbank.
Flavius Searle, No. 1—John R. Graham.
Flavius Searle, No. 2—Edmund J. Croce.
Charles Pratt Strong—Albert W. Cowan.
Isaac Sweetser—Leslie M. Bell.
John Thomson Taylor—Kenneth B. Olson.
Dr. Charles Walker, No. 1—Carlton R. Souders.
Helen L. Walker, No. 2—Hays R. Yandell.
Anna G. Walker—Meyer R. Whitehill.
Leslie W. Walker—John R. Mote.
Abraham A. Watson—Dale G. Friend.
Edward Wigglesworth—Henry S. Warren.
Cotting Gift—William Finkelstein.

Dr. Oliver Cope (A.B. Harvard 1923; M.D. Harvard 1928), Assistant in Surgery, Harvard Medical School, has been awarded a Moseley Traveling Fellowship for study in London.

The resignation of Ovid Otto Meyer, M.D., as Assistant in Medicine, has been accepted to take effect November 10, 1932. Dr. Meyer has accepted an appointment at the University of Wisconsin.

THE ANTI-VIVISECTION CONTEST

At a meeting of the International Conference for the Investigation of Vivisection at the Hotel Waldorf-Astoria in New York City, Rev. Dr. C. Ernest Smith, rector of St. Thomas's Episcopal Church of Washington, D. C., was reëlected President. Two physicians were among the Vice-Presidents chosen. They are Dr. William H. Hay of Pocono, Pa., and Dr. John Fraser of Toronto, Canada. The third Vice-President elected was Mrs. Maude Ingersoll Probasco, daughter of Robert Ingersoll. Other officers were Mrs. Weigie Tracy of Boston, recording secretary; Mrs. Charles P. Farrell of Rye, New York, corresponding secretary, and Mrs. Leslie Johnson of New York, treasurer. About 100 persons attended.

Robert Logan, president of the Anti-Vivisection Society of Philadelphia, assailed physicians who practice vivisection as "cruel seekers after name and fortune". Others also attacked the practice.

A MOVEMENT TO SECURE A BIRTH CONTROL BILL IN CONGRESS

Margaret Sanger and a host of other birth control advocates plan to go to Washington at the opening of Congress in an attempt to force the passage of the birth control bill now on the calendar of the House. This bill would permit the use of mails for dissemination of birth control information among physicians and directors of clinics.

Mrs. Sanger says that the political complexion of the new Congress will have no bearing on the issue. She feels optimistic that the bill will be passed and says that it has the support of the members of both Houses especially among the Southerners who seem less opposed to birth control.

A LARGE PROPORTION OF COLLEGE GRADUATES ARE SELECTING MEDICINE AS A LIFE WORK

Although business once claimed a majority of Harvard graduates, this department of endeavor has dropped to fifth in the ranking choice of the new freshman class, according to questionnaires tabulated at the Phillips Brooks House recently.

The answers indicate that the greatest number of these freshmen are looking forward to the professions for their life work. Not only medicine but law, engineering and teaching are found to be more popular than business. It may be suggested that answers to questionnaires thus early in a freshman's career may not be really indicative of what is to take place later, for it is well known that many men change their purposes with a broader, general education and association with more successful men who may bring to the attention of the younger group some of the attractive features of the work in which their seniors are engaged.

CORRESPONDENCE

THE RESTORATION OF THE LICENSE OF JAMES P. McCUE

The Commonwealth of Massachusetts
Department of
Civil Service and Registration
Board of Registration in Medicine
State House, Boston

November 14, 1932.

The *New England Journal of Medicine*,

This is to inform you that at a meeting of the Board of Registration in Medicine, held on November 10, 1932, it was voted that the license of Dr. James P. McCue, which was suspended on May 12, 1932, be restored to him.

Very truly yours,

Stephen Rushmore, M.D., *Secretary.*

RECENT DEATH

JAQUES — Dr. Henry Percy Jaques of Lenox, Massachusetts, died in Framingham, Massachusetts, November 14, 1932. He was born in 1854, graduated from the Harvard Medical School in 1880 and practiced in Boston for several years. He joined the Massachusetts Medical Society in 1880. After retiring from practice he moved to Lenox.

NOTICES

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about Three Hundred Dollars, will be made on July 14, 1933, provided that an essay deemed by the Committee of Award to be worthy of the Prize shall have been offered.

An essay intended for competition may be upon any subject in Medicine, but must be accompanied by a written assurance from the author that it has not appeared previously in print, either in whole or in part, in any form, and has not been presented elsewhere in competition for a prize. The essay should represent an addition to the knowledge and understanding of the subject based either upon original or literary research. It must be typewritten, and in English acceptable for publication without necessity for editing by the Committee. Any illustrations should be appropriate and correctly annotated with the text. Essays must be received by the Secretary of the College on or *before May* 1, 1933.

Each essay must be sent *without signature*, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; and that it may be published by the author with the consent of the College; other essays will be returned upon application within three months after the award.

John H. Girvin, *Secretary.*

19 South 22D Street, Philadelphia, Pa., U. S. A.

CLINICS IN MEDICINE AT PETER BENT BRIGHAM HOSPITAL

On Thursdays at 3:30 P. M. in the Amphitheatre of the Peter Bent Brigham Hospital, Dr. Henry A. Christian, Hersey Professor of the Theory and Practice of Physic, Harvard, and Physician-in-Chief, Peter Bent Brigham Hospital, will give a series of clinics which members of the medical profession are cordially invited to attend. The next clinic will be given on December 1.

Physicians and medical students are also invited to attend ward rounds of the Medical Staff of the Peter Bent Brigham Hospital held from 10-12 o'clock on Saturdays, as well as a clinical-pathological demonstration immediately following these rounds.

RADIO HEALTH MESSAGES

November-December, 1932

Sponsored by the Public Education Committee of the Massachusetts Medical Society and the Massachusetts Department of Public Health.

Courtesy WBZ. Tuesdays, 4:15 P. M.

November

29 Anemia or the Lack of Blood

December

6 Sickness and Character
13 How Are You?
20 Chorea or St. Vitus' Dance
27 Hemorrhoids

STATE HOUSE BROADCAST

Sponsored by the Massachusetts Department of Public Health.

Courtesy WEEI. Fridays, 12:30 P. M.

Health Subjects of Public Interest discussed by the Division Directors of the Department.

RADIO HEALTH FORUM

Queries from the public are answered under the sponsorship of the Department of Public Health.

Courtesy WEEI. Fridays, 4:50 P. M.

Questions on Health and Prevention of Disease may be sent to Radio Health Forum, State Department of Public Health, State House, Boston.

REPORTS AND NOTICES OF MEETINGS

SUFFOLK DISTRICT MEDICAL SOCIETY

The stated meeting of the Suffolk District Medical Society was held in the Cheever Amphitheater of the Boston City Hospital on Wednesday evening, October 26, at 8:15. Dr. W. H. Robey presided.

Dr. William Morrison presented a case of cured tetanus infection. An eight year old boy was hit by an auto and sustained a superficial injury to his left ankle. After a twelve-day period of incubation he was admitted to the Boston City Hospital with a stiff jaw, neck and back. He also had difficulty in swallowing. He was given 260,000 units of tetanus antitoxin in four days in doses of 20,000 units intraspinally and 40,000 units intravenously. Ten thousand units were also given into the region of the left sciatic and left common peroneal nerves. In giving the antiserum intraspinally, avertin anesthesia was found to be of great help. The boy recovered and showed no residual from the illness.

Dr. Ralph C. Larrabee spoke about Banti's disease. This is a clinical syndrome, and regardless of the cause is helped by splenectomy. The syndrome consists of enlargement of the spleen, hemorrhages from the stomach or bowel, a story of ascites, thrombocytopenia and fibrosis of the spleen.

The disease results from portal obstruction due to any cause. In most instances this is found to be cirrhosis of the liver.

Among 36 cases analyzed by Dr. Larrabee, eight showed alcoholic cirrhosis, three toxic cirrhosis, three adhesions about the liver, four obscure liver damage, one syphilis, one congenital heart disease, one ptosis of the spleen. Once the diagnosis is made, splenectomy should be performed if the patient's condition is suitable for the procedure. Hodgkin's disease, the leukemias, and syphilis are important points in the differential diagnosis.

Dr. Soma Weiss considered certain atypical manifestations of subacute bacterial endocarditis. Occasionally the first indication of this disorder is some embolic phenomenon such as a hemiplegia. Frequently positive blood cultures will be obtained followed by negative attempts. In such cases the vegetations examined at postmortem have been found to contain organisms.

There is some evidence pointing to the possibility of healed subacute bacterial endocarditis. Cases come to autopsy with healed vegetations and fresh ones grafted on top of these, indicating that the body has overcome a former valvular infection. Two excellent specimens were shown of scarred valves due in all probability to healed bacterial endocarditis.

Dr. F. B. Mallory discussed the various factors that lead to cardiac hypertrophy and demonstrated several pathological specimens. The largest heart in the collection of the Boston City Hospital weighs 1400 grams. The largest in the literature weighed 1900 grams. Any factor that leads to increased cardiac work may give hypertrophy. This consists not in an increase in the number of muscle fibers but rather in an increase in size of those fibers already existing.

Dr. I. J. Walker presented statistics to show that contrary to the general opinion, the mortality from appendectomy is decreasing. Owing to better diagnosis we now recognize many more cases of appendicitis than did the earlier clinicians. Therefore in point of numbers more people die from appendicitis since so many more are diagnosed as having the disease. Considered relative to the incidence, however, the mortality is far less.

Dr. Arthur Kimpton demonstrated two cases in which right colectomy had been performed. The first was a man of 37, who had suffered from intermittent cramps in the right lower quadrant for several years. The attacks were suggestive of appendicitis. Examination showed blood in the stools, hemorrhoids, and a mass in the right lower quadrant. At laparotomy the clinical diagnosis was abscess and tuberculosis of the cecum involving the ileocecal valve. The pathological report of the appendix was acute appendicitis, and in view of this finding no further operative procedure except drainage was carried out. The patient gained weight after the operation, but the sinus persisted.

The mass, which had formerly been felt in the right lower quadrant, reappeared, and another operation was performed. This time a right colectomy was done followed by an ileocolostomy. Both the clinical and pathological diagnoses of the removed specimens were tuberculosis.

The second case was that of a 31 year old woman with a change of bowel habits. This patient had a mass in the right lower quadrant, and prior to admission had been subjected to a panhysterectomy. The mass persisted and at a second operation inoperable carcinoma of the cecum was diagnosed. After admission to the Boston City Hospital a third operation was done. In spite of a previous hopeless prognosis, it was found possible to remove the right colon doing an end to end anastomosis between the terminal ileum and the transverse colon. A gallbladder full of stones was an incidental finding. The patient recovered satisfactorily. Later it was found necessary to remove her gallbladder for cholelithiasis, which she also withstood quite well.

Dr. Kimpton presented a third case of carcinoma of the rectum. A 58 year old laborer complained of constipation and loss of weight, but consulted no one. He entered the hospital after three days of complete obstruction with vomiting. On admission the vomiting was fecal. A cecostomy was done and a tumor discovered below the rectosigmoid junction. The patient recovered from his acute obstruction.

One month later the patient came to the hospital and was seen in consultation. A one-stage resection of the rectum was done with an end colostomy. The pathological report was carcinoma of the rectum of the colloid type. The patient made an uneventful recovery. During the healing of the cecostomy, the permanent colostomy contracted and it was necessary to do a plastic operation on the colostomy. The patient was demonstrated and showed a perfectly healed sacral area.

DELTA OMEGA HONORARY PUBLIC HEALTH SOCIETY

The annual meeting of Delta Omega, the Honorary Public Health Society, was held in Washington, October 25, 1932, with the largest attendance in the history of the organization, including three honorary members, Colonel F. F. Russell of the Rockefeller Foundation, Dr. S. Josephine Baker, and Dr. M. P. Ravenel, editor of the *American Journal of Public Health*, and also General M. A. DeLaney, Acting Surgeon General of the United States Army. The following officers were elected: President, Dr. A. W. Freeman, Professor of Public Health Administration, Johns Hopkins University; Vice President, Professor Ira V. Hiscock, Yale School of Medicine, and Secretary-Treasurer, Dr. W. G. Smillie, Professor of Public Health, Harvard University.

Dr. James A. Tobey of the Massachusetts Institute of Technology Chapter was the retiring President. Among other activities, the Society, with the

coöperation of the American Public Health Association, has republished Budd's classic work on Typhoid Fever, and this may be obtained by any one interested, at a nominal cost, from the American Public Health Association, 450 Seventh Avenue, New York City.

CLINICAL STAFF OF THE BOSTON DISPENSARY

An open meeting of the Clinical Staff of the Boston Dispensary was held on Tuesday evening, November 1, at 8 P. M., at 25 Bennet Street. This meeting was under the auspices of the Department of Clinical Research. Dr. Joseph J. Skirball presided.

The first paper of the evening was read by Dr. William D. Wheeler on "Persistently Positive Blood Reactions in Treated Syphilis." With the advent of more delicate serum reactions such as the Hinton test, cases of persistently positive blood tests in treated syphilis are increasing. Regardless of the many theories propounded to explain this phenomenon, most investigators are agreed that in such cases there is some remaining focus of the spirochetes in the body.

A series of 200 cases were selected for study. All of these had received long courses of treatment. Of them 166 had positive Wassermann and 200 positive Hinton reactions. One hundred and ninety-two had syphilitic involvement of an organic nature detectable by clinical signs. Only eight were free of signs and symptoms.

On the basis of observations made clinically, it was concluded that the chief contributing causes toward persistently positive blood reactions are the following: 1. Hard labor. 2. Alcohol. 3. Late diagnosis. 4. Irregular treatment. 5. The presence of other diseases.

Dr. William P. Boardman in discussing this paper called attention to the resistance of alcoholics and nephritics to the treatment of syphilis. Doubt was expressed by Dr. Boardman as to the importance of hard labor; and such conditions as pyorrhea and caries as etiological agents in persistently positive blood reactions.

The second paper was read by Dr. Arthur Berk on "The Hinton Test as an Aid in the Detection and Exclusion of Neurosyphilis; a Clinical and Laboratory Study." This work was done by Dr. William Hinton and Dr. Berk on 787 ambulatory patients with neurosyphilis.

From these studies the authors include: 1. A negative Hinton test on the blood almost totally excludes the possibility of positive laboratory findings of neurosyphilis. 2. A positive Hinton together with neurological signs and symptoms is often unaccompanied by a positive or even a doubtful spinal fluid, owing to the fact that the patients were receiving vigorous treatment at the time of the lumbar puncture. 3. A total absence of neurological signs and symptoms and the presence of a positive Hinton reaction admit the possibility of asymptomatic neurosyphilis, though the incidence of such cases in this series was but 1.4%. 4. The authors concluded, "From our experience in practice and from consultation, a positive Hinton together with clinical signs of neurosyphilis in a person who has had no antisyphilitic treatment or an inadequate amount of it, has been sufficient evidence upon which to diagnose syphilis of the central nervous system without the necessity of performing a lumbar puncture."

Dr. James B. Ayer opened the discussion of this paper. In 98 unselected cases of neurosyphilis from the records of the Massachusetts General Hospital, 23 showed a negative Hinton test, although this was much more sensitive than the Wassermann reaction. In another series of unselected neurological lesions not due to syphilis, the Hinton test was consistently negative. Dr. Ayer stated that the spinal fluid is of great value in estimating the degree of involvement as well as the progress and prognosis of the case. It also suggests the type of lesion, and therefore should not be abolished in the diagnosis of neurosyphilis.

Dr. Abraham Myerson objected to replacing the lumbar puncture by the Hinton test because it violates the trend of modern medicine, which is to learn all that one can about the patient.

In closing the discussion, Dr. Hinton stated that Dr. Ayer's figures were probably so low in positives because the old technique was used in doing the Hinton test. He added that he was not in favor of abolishing the lumbar puncture entirely in neurosyphilis. For the practitioner in the country, who cannot do routine lumbar punctures, the Hinton test is of great assistance in ruling out neurosyphilis on the basis of this study.

THE ESSEX SOUTH DISTRICT MEDICAL SOCIETY

The Essex South District Medical Society held its regular meeting at Salem Hospital on Wednesday, November 9, 1932, with the following program:

5:00 P. M. Clinic. Presiding Officer: Dr. James E. Simpson, President, Salem Hospital Medical Staff.

1. Significance of Jaundice. Report of Case. Dr. Martin T. Field.

2. (a) A Report of Three Cases of Lobar Pneumonia with Acid Fast Bacillus. (b) X-ray Plates of Lead Deposit in Bones. Dr. J. Frank Donaldson.

3. (a) Tendon Transplant. (b) Fractures around the Elbow. Dr. Charles L. Curtis.

4. A Few Notes on the Liver Therapy of Pernicious Anemia—Lantern Slides as Adapted to the Hospital and Nursing School Needs. Dr. Stuart N. Gardner.

5. Plastic Surgery of the Kidney. Dr. Edward L. Peirson, Jr.

6. Carcinoma of the Lung. (Two cases.) Dr. Walter G. Phippen, Dr. Charles F. Branch.

8:00 P. M. Evening Program. Nurses' Home. "A Brief Survey of European Medicine." Dr.

Charles F. Branch, Pathologist, Salem Hospital, and Associate Professor of Pathology, Boston University Medical School.

WM. T. HOPKINS, *Reporter.*

DR. CHRISTIAN ADDRESSES THE SOUTH END MEDICAL CLUB

Dr. Henry Christian, Professor of Medicine, Harvard Medical School, Physician-in-Chief, Peter Bent Brigham Hospital, lectured on "Bedside Diagnosis of Heart Disease" at the meeting of the South End Medical Club held November 15 at the office of the Boston Tuberculosis Association, 554 Columbus Avenue, Boston. Dr. Christian said: "The first important thing to do in the bedside diagnosis of heart disease is to get the patient's history, complaints such as shortness of breath, indigestion, how much exercise and activity cause pain, respirations, and developments. In certain forms of heart disease the history will tell the whole story, as with 'angina pectoris'. Other methods may be used for confirmatory diagnosis. In making a physical examination it is most important to find out if the patient has evidence of enlargement of the heart. An enlarged heart is evidence of heart disease sooner or later. The simple methods used to determine the forms of heart disease are (1) history, particularly the age group the patient is in and whether he has had youthful rheumatism; (2) feeling the pulse is very important in diagnosis; (3) palpation (I feel this is beginning to be a lost art; it is not practiced or checked up enough); (4) murmurs and auscultation. Systolic murmurs do not help in diagnosis; they usually mean a dilated heart cavity with a dilated orifice, or they may not mean anything. Many normal hearts have systolic murmurs. A diastolic murmur always means a valve lesion, a leak, or an obstruction.

"The electrocardiograph does help in diagnosis but I feel we should use the simple methods such as our fingers, eyes, ears, and brains, in the diagnosis of heart disease."

Suggested simple methods for studying rhythm were given, and case histories were discussed by Dr. Christian.

THE FRANKLIN DISTRICT MEDICAL SOCIETY

The November meeting of the Franklin District Medical Society was held at the Weldon Hotel in Greenfield on November 10 with most of the members present.

After routine business President Johnson introduced Dr. W. R. Ohler of Boston as guest speaker. Dr. Ohler chose for his subject "Diseases of the Thyroid Gland" and covered the subject thoroughly. He illustrated his talk with clear-cut charts and gave a most practical and illuminating explanation of this more or less obscure subject. The address stimulated considerable discussion and Dr. Ohler answered many questions. The meeting was followed by luncheon at the hotel.

CHARLES MOLINE, M.D., *Secretary.*

AN INVITATION TO ATTEND THE MEETING OF THE AMERICAN SOCIETY FOR THE STUDY OF ARTHRITIS

The American Society for the Study of Arthritis invites all members of the profession to attend a meeting to be held in the auditorium of the Evans Building of the Massachusetts Memorial Hospitals, 80 East Concord Street, Boston, on Friday evening, December 2, 1932, at eight o'clock.

The program will consist of the following papers:

The Rôle of Allergy in Arthritis, presented by Dr. F. M. Rackemann of Boston.

The Gastro-Intestinal Tract in Relation to Arthritis, presented by Dr. W. W. Lermann of Pittsburgh.

Arthritis from the Standpoint of the Patient, presented by Dr. Reginald Burbank of New York City.

A Study of Streptococci, presented by Dr. L. G. Hadjopoulos of New York City.

Discussion of these papers by Dr. Sanford Hooker and Dr. George P. Sanborn of Boston, and Dr. Ben Huggins of Chicago.

In order that the program may be completed and time reserved for discussion, members of the profession are requested to be present promptly at eight o'clock.

A. G. HOWARD, M.D., *Local Chairman.*

THE NORFOLK DISTRICT MEDICAL SOCIETY

A regular meeting of the Society will be held on Tuesday, November 29, 1932, at 8:30 P. M., in the Norwood Hospital, Norwood, Mass. Telephone Norwood 1520.

Business:

Communications: Papers by the Norwood Hospital Staff.

Collation.

FRANK S. CRUICKSHANK, M.D., *Secretary.*
1695 Beacon Street, Brookline.

NEW ENGLAND PHYSICAL THERAPY SOCIETY

SCHEDULE 1932-33

Meetings will be held at the Boston Square and Compass Club, 448 Beacon Street, Boston, Mass., on the dates specified at 8:00 P. M. unless otherwise stated on the monthly program.

PRELIMINARY PROGRAM

December 21, 1932 — Chairman: Charles W. McClure, M.D. Subject: Gastric Ulcer.

January 19, 1933 — Chairman: William G. Curtis, M.D. Subject: Dermatology.

February 16, 1933 — Chairman: Edward H. Trowbridge, M.D. Subject: Electrosurgery.

March 15, 1933 — Chairman: William D. McFee, M.D. Subject: Diseases of the Chest.

April 19, 1933 — Chairman: DeWitt G. Wilcox, M.D. Subject: Gynecology.

May 17, 1933 — Chairman: Franklin P. Lowry, M.D. Subject: Arthritis.

OFFICERS

President: Solon Abbott, M.D.
First Vice-President: Arthur L. Brown, M.D.
Second Vice-President: William G. Curtis, M.D.
Secretary: Arthur H. Ring, M.D., Tel. Arl. 0081.
Treasurer: Franklin P. Lowry, M.D.

COUNCILORS

For three years: William D. McFee, M.D., John F. Valentine, M.D.

For two years: DeWitt G. Wilcox, M.D., George B. Rice, M.D.

For one year: Chester S. Leach, M.D., John L. O'Toole, M.D.

COMMITTEES

Membership: William D. McFee, M.D., Chairman; Franklin P. Lowry, M.D., George B. Rice, M.D.

Entertainment: Morris A. Cohen, M.D., Chairman; Frank B. Colloten, M.D., G. W. Dickinson, M.D.

Program: Frank T. Harvey, M.D., Chairman; Arthur L. Brown, M.D., Arthur H. Ring, M.D.

Publication: Arthur H. Ring, M.D., Chairman; DeWitt G. Wilcox, M.D., William H. Watters, M.D.

SUFFOLK DISTRICT MEDICAL SOCIETY

The November meeting of the Suffolk District Medical Society will be a clinical meeting, held at the Peter Bent Brigham Hospital, 721 Huntington Avenue, Boston, on Wednesday, November 30, 1932, at 8:15 P. M. The program will be presented by the Harvard Medical School and School of Public Health.

CLINICAL PROGRAM

1. How Emotions Disturb the Body. Dr. Walter B. Cannon.
2. Exophthalmic Goitre and Vitamin D Deficiency. Dr. Joseph C. Aub.
3. Field Studies in Common Colds. Dr. Wilson G. Smillie.
4. The Results of Serum Treatment in Pneumonia. Dr. Lloyd D. Felton.

WILLIAM H. ROBEY, M.D., *President*,
LELAND S. MCKITTRICK, M.D., *Secretary*.

WORCESTER STATE HOSPITAL

RESEARCH STAFF

On Monday night, November 28, 1932, the Research Staff of the Worcester State Hospital, Worcester, Mass., will present a series of papers dealing with their research on Schizophrenia at the State Hospital for Mental Diseases at 8 P. M. Discussion will follow. The papers will be as follows:

1. The Schneider Index as criterion of cardiovascular efficiency in schizophrenia. James R. Linton, M.D.
2. Effects of Adrenal Cortex Medication on various functions of the body. R. G. Hoskins, Ph.D., M.D., Harry Freeman, M.D.
3. Liver Function Studies in Schizophrenia. F. H. Sleeper, M.D., J. M. Looney, M.D.
4. Correlation of Physiological and Psychiatric Findings in a Case of Schizophrenia. Milton H. Erickson, M.D.

NEW ENGLAND PEDIATRIC SOCIETY

A MEETING TO DISCUSS ALLERGY AS MANIFESTED IN INFANCY AND CHILDHOOD, FRIDAY, DECEMBER 9, 1932

Afternoon Session

Children's Hospital Amphitheatre, 4:00 P. M.

1. Presentation of Patients (Surgical)—Dr. William B. Ladd.
2. Presentation of Patients (Orthopedic)—Dr. Frank Ober.
3. Classification of Blood Cells (Colored Lantern Slides)—Dr. Louis K. Diamond.
4. Diphtheria Toxoid and Toxin-Antitoxin Mixture—Dr. Elliott S. Robinson.
5. Presentation of Patients (Infants)—Dr. Harold Stuart.
6. Presentation of Patients (Medical)—Dr. Kenneth Blackfan.

Evening Session

Boston Medical Library, 8:00 P. M.

1. Election of Officers.
2. The Allergic Child—Dr. Bret Ratner, New York.
3. Discussion.
4. Refreshments.

Physicians and Medical Students invited.

SOCIETY MEETINGS
CONGRESSES AND CONFERENCES

November 28—Worcester State Hospital Research Staff. See notice elsewhere on this page.
November 30—New England Obstetrical and Gynecological Society. See notice on page 911, issue of November 17.
December 1—Clinics in Medicine at Peter Bent Brigham Hospital. See page 957.
December 2—American Society for the Study of Arthritis. See page 960.
December 7—American Board of Obstetrics and Gynecology. Announcement of Coming Examinations. See notice on page 557, issue of September 22.
December 7—New England Heart Association. See notice on page 813, issue of November 3.
December 9—New England Pediatric Society. See notice elsewhere on this page.
December 9 - May 12—William Harvey Society. See page 765, issue of October 27.
December 12—Boston Orthopaedic Club. See page 812, issue of November 3.
December 14—New England Dermatological Society. Clinical Meeting, Boston City Hospital at 3 P. M.
December 21 - May 17—New England Physical Therapy Society. See page 960.
February 6-10—The American College of Physicians. See page 765, issue of October 27.
February 17 and 18—The New England Hospital Association. See notice on page 911, issue of November 17.

DISTRICT MEDICAL SOCIETIES

ESSEX NORTH DISTRICT MEDICAL SOCIETY

January 4—Wednesday, Semi-Annual Meeting. Program to be announced.
May 3—Wednesday, Annual Meeting. Program to be announced.

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

Tentative Program
1932-1933

Wednesday, December 7, 1932—Beverly Hospital. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. Robert Greenough. Subject: Postgraduate Instruction.
Wednesday, January 4, 1933—Danvers State Hospital, Hathorne. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. A. Warren Stearns, Dean of Tufts College Medical School.

Wednesday, February 1, 1933—Council Meeting, Boston.

Wednesday, March 8, 1933—Lynn Hospital. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. Soma Weiss, Boston City Hospital Subject: Arterial Hypertension.

Wednesday, April 5, 1933—Essex Sanatorium, Middleton. Clinic 5 P. M. Dinner 7 P. M. Speaker: Dr. Wilson G. Smillie, Professor of Public Health Administration, School of Public Health, Harvard University. Subject: Common Colds.

Thursday, May 4, 1933—Censors' Meeting, Salem Hospital, 3:30 P. M.

Tuesday, May 9, 1933—Annual Meeting. Salem Country Club, Forest Street, Peabody. Golf in afternoon; greens fee $2.00. Dinner at 7 P. M. Speaker: Dr. George Burgess Magrath. Subject to be announced later. Ladies invited.

R. E. STONE, M.D., Secretary.

FRANKLIN DISTRICT MEDICAL SOCIETY

Meetings of the Franklin District Medical Society will be held at the Wellon in Greenfield on the second Tuesday of January, March and May.

CHARLES MOLINE, Secretary.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY

The program of the Middlesex East District Medical Society for the coming year is as follows:

January 11 at Wakefield.

March 15 at Melrose.

May, at the Meadowbrook Club, Reading.

ALLAN R. CUNNINGHAM, Secretary.

NORFOLK DISTRICT MEDICAL SOCIETY

November 29—Norwood Hospital, Norwood, Mass. See page 960.

January 31, 1933—Roxbury Masonic Temple, 8 P. M. Subject: "Stomach Surgery"—Motion pictures. Dr. William R. Morrison.

February 28, 1933—Time and place to be announced. "The Diagnosis and Treatment of Anemia," by Dr. William P. Murphy.

March 28, 1933—Time, place and subject to be announced. Speaker will be Dr. J. P. O'Hare.

May—Annual Meeting. Time, place and subject to be announced.

FRANK S. CRUICKSHANK, M.D., Secretary.
1695 Beacon Street, Brookline.

SUFFOLK DISTRICT MEDICAL SOCIETY

Wednesdays at 8:15 P. M.

November 30, 1932—Clinical Program, Peter Bent Brigham Hospital. See page 961.

January 25, 1933—General Meeting in association with the Boston Medical Library at the Boston Medical Library. Titles and speakers to be announced later.

March 29, 1933—Clinical Program, Massachusetts General Hospital.

April 26, 1933—Annual Meeting. Election of Officers. Scientific Program—Titles and speakers to be announced later.

The Medical Profession is cordially invited to attend all of these meetings.

WILLIAM H. ROBEY, M.D., President,
LELAND S. McKITTRICK, M.D., Secretary,
HILBERT F. DAY, M.D., Boston Medical Library.

WORCESTER DISTRICT MEDICAL SOCIETY

Schedule of meetings for 1932-1933:

Wednesday, December 14—Meeting at the Worcester Chamber of Commerce Auditorium. Paper by Dr. Joseph Meigs of Boston, entitled "Uterine Bleeding."

Wednesday, January 11—Dinner and meeting at the Worcester City Hospital. Paper by Dr. Morris Fishbein, Editor of the Journal of the American Medical Association.

Wednesday, February 8—Dinner and scientific meeting at the Worcester State Hospital. Program to be announced later.

Wednesday, March 8—Dinner and scientific program at the Memorial Hospital, Worcester. Program to be announced later.

Wednesday, April 12—Dinner and scientific meeting at the Rutland State Hospital. Scientific program to be announced later.

Wednesday, May 10—The Annual Meeting. Place and program to be announced later.

ERWIN C. MILLER, Secretary.

BOOK REVIEW

*Mesenteric Lymph Adenitis**. By J. P. Strömbeck.

This monograph is a mine of information on a subject too little known to the average physician and surgeon. In addition to giving a complete critical survey of all the literature in the last two generations, it contains brief histories of 349 cases. The author has wisely limited himself to consideration of his subject and does not branch out in the field of tubercular peritonitis and other related conditions.

One important point that he proves well is the wisdom of maintaining a very conservative surgical attitude toward disease in these lymph nodes. Unless confronted by the rare acute conditions such as intestinal obstruction due to secondary changes, the surgeon should confine his efforts to a routine appendectomy and closure when he happens to discover this condition unexpectedly in the course of an operation. He points out the difficulties of differential diagnosis, but shows how a presumptive diagnosis can frequently be made. When exploration has to be done to rule out a question of a dangerous appendicitis, the author recommends a McBurney incision. This rather surprised the reviewer who considers the McBurney incision an excellent one for some purposes, but not especially suitable for exploration. The author proves, what many of us have fortunately suspected, that the calcified mesenteric nodes found on x-ray examination and not associated with symptoms, need not be considered as harmful in any way.

*Published by *Acta Chirurgica Scandinavica.*

BOOKS RECEIVED FOR REVIEW

The Science of Signs and Symptoms by Robert John Stewart McDowall. Published by D. Appleton and Company. 440 Pages. Price $7.00.

Mental Deficiency Due to Birth Injuries by Edgar A. Doll, Winthrop M. Phelps and Ruth Taylor Melcher. Published by The Macmillan Company. 289 Pages. Price $4.50.

The Advance of Medicine by Lord Moynihan. Published by the Clarendon Press, Oxford University Press. 64 Pages. Price $1.00.

Handbook of the Vaccine Treatment of Chronic Rheumatic Diseases by H. Warren Crowe. Second Edition. Published by Humphrey Milford, Oxford University Press. 79 Pages. Price 80c.

Orthopedics in Childhood by William L. Sheed. Published by J. B. Lippincott Co. 318 Pages. Price $5.00.

Functional Disorders of the Gastrointestinal Tract by William Gerry Morgan. Published by J. B. Lippincott Company. 259 Pages. Price $5.00.

Posture — Its Relation to Health by Frank D. Dickson. Published by J. B. Lippincott Co. 213 Pages. Price $5.00.

A Text-Book of Pathology by William Boyd. Published by Lea & Febiger. 946 Pages. Price $10.00.

The Cardiac Output of Man in Health and Disease by Arthur Grollman. Published by Charles C. Thomas. 325 Pages. Price $4.00.

Textbook of Medicine edited by J. J. Conybeare. Second Edition. Published by William Wood & Co. 1004 Pages.